

Corporate Social Responsibility Disclosure and Corporate Financial Performance: A Panel Data Analysis

Meriam Amamou^{1,2}

¹*Department of Human Resources Management, College of Business, University of Jeddah, Jeddah, Saudi Arabia*

²*Department of Management, University of Sousse, Higher Institute of Management, ISG, Tunisia; E-mail: amamou.meriem@gmail.com*

Abstract: This study investigates the relationship between Corporate Social Responsibility (CSR) and Corporate Financial Performance (CFP) and how CSR activities impact a company's financial performance. We used STATA and a panel regression to analyze the data from sixty French-listed firms from 2012 to 2020. The data was obtained from the DataStream website. The results showed that CSR has a positive and significant impact on CFP. Additionally, companies that engage in socially responsible activities positively impact their financial performance. However, size and leverage have a negative impact on a company's financial performance, while market-to-book ratio, economic growth, and age have a positive impact.

Keywords: Corporate Social Responsibility, Corporate Firm performance, French Securities Market.

1. INTRODUCTION

Corporate Social Responsibility (CSR) is a voluntary moral obligation towards society and a legal and economic responsibility towards stakeholders. The concept of CSR aims to improve a company's competitiveness and create value for it. According to Tariq et al. (2022), CSR can also be viewed as a mechanism for enhancing and creating value for a company's competitiveness. The importance of Corporate Social Responsibility (CSR) in Europe is very high. As a result, the European directive "2014/95/EU" mandates listed companies to publish a non-financial report that describes their social, economic, and environmental policies. This regulation aims to prevent any damage to the image of European companies due to the high risks associated with their industrial activities.

According to Filippi (2020), French companies implementing a CSR policy experience a 13% increase in financial performance. Demaria and Rigot (2021) confirmed that French companies listed on Euronext Paris' CAC 40 index have adopted a sound environmental reporting policy regarding climate risks, positively impacting their financial performance. CSR reporting can be a strategic tool to improve overall firm performance. We aim to answer the following questions:

1.1. Can CSR lead to an improvement in CFP?

Given the increasing attention paid to Corporate Social Responsibility (CSR) by European companies and regulators, we have decided to focus on this issue. France is reinforcing its commitment to CSR through new regulations, such as the PACTE law of 22 May 2019.

The remainder of the study is structured as follows: Section 2 outlines the relevant literature on this topic and presents our hypothesis. Section 3 describes the methodology, including sampling, data collection, and empirical research design. Section 4 provides the empirical results, while Section 5 provides concluding remarks.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESIS

2.1. Theoretical background

According to Dahlsrud (2008), CSR is a complex and multifaceted concept encompassing economic, environmental, social, and legal aspects. Carroll (1979) argues that CSR serves several functions, including aligning corporate and societal goals on the social front. Moreover, Waddock and Graves (1999) emphasize the legitimate function of CSR, which enables actors in society to legalize and justify their power.

According to stakeholder theory, a direct relationship exists between CSR and CFP. Additionally, neo-institutional theory suggests that CSR legitimizes a company's actions. Given that companies are subject to various standards and regulations, they may feel pressured to conform, impacting their management approach (DiMaggio & Powell, 1983). In response to regulatory pressure to limit managerial discretion and improve business ethics, institutional compliance signals favorable corporate conditions to the financial market.

Non-financial reporting is a legal requirement in France. This regulatory mechanism enforces transparency in non-financial activities and builds trust with stakeholders. According to Surroca et al. (2009), companies have realized the significance of CSR and its positive effect on the business. Therefore, there is a constructive correlation between CSR and company performance, which enhances economic value creation.

2.2. Measures of CSR

Based on an empirical literature review, there seems to be a lack of consensus regarding measuring CSR, particularly its impact on CFP. Some studies rank firms based on various dimensions of social performance, as determined by specific indices, while others classify them using surveys conducted by faculty members or students. A content analysis may be conducted on its annual reports to determine whether a company has focused on CSR. Furthermore, CSR was measured using a dummy variable where firms included in the Index were allocated a value of one, while others were given a value of zero. This approach was used by various studies, including Lima Crisóstomo et al. (2011) and Chetty et al. (2015).

2.3. Measures of Corporate Performance

The literature review highlights the lack of agreement in measuring CFP, with some studies utilizing accounting metrics. Such as ROE (Ardi et al., (2021); Brunton et al., (2017), ROA (Ardi et al., (2021); Wang et al., 2016; Ta & Bui, 2018; Brunton et al., 2017), Return on Sales (ROS) (Stanwick & Stanwick, 1998), Return on Capital Employed (ROCE) and Earnings per Share (EPS) (Waddock & Graves, 1997). Despite their utility, financial statements have two primary drawbacks. Firstly, they are susceptible to variations in accounting methods, policies, and procedures, which the discretion and manipulations of management can influence. Secondly, they predominantly reflect the historical performance of a company. Some studies use Tobin's ratio, a market-based CFP measure that compares a company's market value to its replacement cost. This measure provides insights into a firm's future financial performance and is less susceptible to manipulation of accounting choices and management discretion (McGuire et al., 1988). As there is no consensus on CFP measurement, we utilized accounting-based and market-based measures, following Wang & Chen (2017).

2.4. Previous Studies and Hypothesis

While some studies have reported no association between CSR and CFP (McWilliams & Siegel, 2000), others reported a negative effect (Buchanan et al., 2018). Furthermore, some studies suggest that the impact of CSR on CFP may be conditioned and moderated (Zhu et al., 2014), and almost all previous studies confirm the positive association between CSR and CFP. Castka et al. (2004) and Chan et al. (2017) state that high-performing firms are more probable to be involved in CSR activities to reduce externalities. Numerous studies suggest that companies prioritizing ethical and socially responsible practices tend to have higher levels of stakeholder satisfaction, leading to better financial performance. Some of the studies supporting this argument include those conducted by Cornett et

al. (2016) and Rhou et al. (2016). Another study by Oh et al. (2017), which examined 104 firms from the S&P 500 Index from 2009 to 2013, also found that firms that betrothed in CSR events had higher financial performance.

After reviewing the relevant literature, both theoretical and empirical, it can be settled that there is no consensus about the correlation between CSR and CFP. This may be due to the inadequate specification of CSR and CFP concepts and measures and the failure to adequately control for other explanatory variables. This study aims to account for the key variables affecting CSR and CFP. Our main objective is to determine whether CSR positively impacts CFP. Therefore, we state our hypothesis as follows:

Hypothesis: CSR has a positive impact on CFP

3. METHODOLOGY

Our research began by collecting data for all companies listed under Euronext Paris from 2012 to 2020. We excluded financial companies with specific accounting rules and companies with incomplete data. As a result, our sample is composed of 60 SBF 120 index-listed companies from 10 industries. These industries are Hotels, Transport, Energy, Electricity, Telecommunications, Pharmaceutical, Food Retailers, Food Producers, Gas, Water, and Chemical Products. We retrieved data from the "DataStream" database, specifically from the ESG branch dealing with CSR activity data. We have obtained the data from the website of the governmental body "National Institute of Statistics and Economic Studies".

We aim to investigate the impact of CSR on CFP. Our study uses three measures to proxy CFP - ROE, Return on ROA, and Tobin's Q. Each measure is used in a separate regression model to explain CFP with CSR. The ESG score is used to measure CSR. Other explanatory variables such as Leverage, firm size, overvaluation, economic growth, and firm age are also included to control for other effects on CFP.

Our dependent variable, CFP, is alternatively measured by accounting-based measures (ROA and ROE) and market-based measures (Tobin's Q). Return on Assets (ROA) is a financial ratio that measures a company's ability to generate profit from its assets and investments. A higher ROA indicates better efficiency and productivity in managing resources, whereas a lower ROA suggests a need for improvement. The ROA is typically measured as a percentage by dividing a company's net income by its average total assets. The ROE is a measure that evaluates a firm's effectiveness and capacity to generate income from its financing. The higher the ROE, the more effectively the company's management utilizes the shareholder's equity to generate growth and profit. The ROE is intended to divide the net income by the shareholder's equity.

Tobin's Q is an indicator that assesses a company's long-term profitability and value. It measures the ratio of a company's market value of assets to their replacement cost. Hence, it represents a market measure of the company's financial performance. Tobin's Q determines whether an asset is overrated or underestimated, which helps to make predictions about capital investments. If Q is greater than 1, it indicates that the asset is overvalued, while if Q is less than 1, it suggests that the asset is undervalued. Tobin's Q is calculated by dividing the market value of equity and the book value of debt by the book value of total assets. The independent variable we are studying is CSR, which we measure using the ESG score. The ESG score consists of three dimensions: Environmental, Social, and Governance. It is a commonly used index to identify CSR efforts because it gives information on how companies address CSR issues about their long-term growth objectives and strategies and how they manage risks and other Organisational aspects.

Tracking ESG scores has gained significant attention in business. It was first introduced in the United Nations Principles for Responsible Investment and has since been included in numerous CSR reports. Leading business consulting firms have also implemented it in practical ways. Bassen et al. (2006) argue that tracking ESG scores is crucial for implementing CSR and providing investors with ESG information to assess a firm's risks and opportunities. The ESG score is calculated using the simple average of the three basic scores: SCE, SCS, and SCG.

The environmental score (SCE) is connected to the environment and refers to society's ability to use natural resources rationally and efficiently to conserve them for future generations. It reflects how a business interacts with the environment through its operations, goods, or services. The social score (SCS) is associated with the social dimension and measures a firm's capability to implement policies that respect human rights, diversity, cultural norms, and community rights. The goal is to reduce the hole among the rich and poor and promote social justice. The company's response to concerns for values, norms, rules, and roles reflects the cultural dimension's influence on human behavior.

The governance score (SCG) is related to the governance dimension, a fundamental dimension for organizations that want to progress in managing CSR. It measures the company's good governance, reflecting all the rules, principles, and procedures that affect the structure and operations of organizations. It promotes transparency and communication with stakeholders, providing them with security in managing financial and non-financial risks and a sustainable strategy aimed at their socially responsible management.

Several explanatory variables are introduced to control other factors affecting CFP, including leverage, firm size, overvaluation, economic growth, and firm age. The firm's leverage (Lev) is used to govern the company's capital structure profits, such as the tax shield effect (McConnell & Servaes, 1990), and charges, such as an undesirable market awareness of the financial viability of a firm (Brealey & Myer, 2003). It is intended to use the following formula. Meanwhile, firm size (Size) regulates the impacts of economies of scale and market power (Nachum, 2019; Aras & Crowther, 2009).

The overvaluation factor is proxied by the market-to-book ratio (MTB), a financial valuation measure used to assess a company's current market value against its book value to determine whether its stock is overrated or underrated. It allows potential investors to know the value of a firm once its assets have been sold and all its debts paid. A higher figure for MTB would suggest that investing in a company will be expensive. However, this may also be because they are expected to do well in the future. Thus, this ratio affects and explains CFP. When analyzing economic growth, the Gross Domestic Product (GDP) is the leading indicator used to assess the growth of a country. It is calculated by comparing the evolution of GDP between two periods, considering inflation or deflation. A firm's age, or the time elapsed since its creation, can be measured using its lifespan in years. To calculate this, we take the logarithm of a value that adds 1 to the difference between the year the company was created and the year being considered. Table 1 below shows data collection resources for each variable of our study.

Table 1: Description of variables

Variable name	Abbreviation	Description	Source	Calculation
Return on Assets	ROA	Firm financial performance (Net Income / Average Total Asset)	DataStream	Author's
Return on Equity	ROE	Firm financial performance (Net Earnings / Shareholders' Equity)	DataStream	Author's
Tobin's Q	Q	Tobin's Q is the ratio of a company's market value to its assets' replacement cost.	DataStream	Author's
Corporate Social Responsibility	C	Statistics from Saudi companies taken from annual reports, individual company websites, and the Saudi Stock Exchange (PSX) Website	DataStream	Author's
Leverage	L	Calculated by the ratio of total debts to assets	DataStream	Author's
Size	S	Derived by using the logarithm of total assets	DataStream	Author's
Overvaluation	M	There is a metric that compares the book value of a firm to its market value.	DataStream	Author's
Gross domestic product	G	GDP measures the total value of goods and services produced and sold within a country's borders in a given period.	National Institute of Statistics	Economic Studies
Age	A	Calculated by the number of years of a firm since the commencement	DataStream	Author's

A Generalized Least Squares (GLS) regression model will be employed to explain the relationship between CSR and CFP. Each of the three CFP measures (ROA, ROE, and Tobin's Q) will be separately regressed on the independent (CSR) and additional explanatory variables (Lev; Size; MTB; GPD; and Age). In addition, as a sensitive analysis, each regression model is tested using alternatively the four measures of CSR: each of three

score components of CSR (SCE, SCS and SCG) and the global one which combines all of them, ESC score. Our regression model can be formulated as follows:

$$CFP_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 L_{it} + \beta_3 S_{it} + \beta_4 M_{it} + \beta_5 G_{it} + \beta_6 A_{it} + \varepsilon_{it}$$

Where: $i = 1, \dots, n$. It means firm number.

$t = \text{year } 1, \dots, \text{year } K$. It means a year of observation.

ε : regression's residuals.

CFP: corporate financial performance measured, alternatively by ROA, ROE, and Tobin's Q.

ESG: The ESG score of CSR, as measured by the simple average of the three basic scores: SCE, SCS and SCG: $ESG = (SCE + SCS + SCG) / 3$.

LEV: Firm's Leverage, as measured by the ratio dividing "Total liabilities book value" by "Total assets book value".

SIZE: Firm's size, as measured by the logarithm of total assets.

MTB: The overvaluation, as proxied by Market to Book ratio (MTB), which is equal to "Share price X Outstanding shares" / "Equity book value".

GDP: The economic growth proxied by the evolution of gross domestic product between two periods.

AGE: A firm's age that adds 1 to the number obtained by subtracting the year the company was created from the year considered: $Age = Ln (\text{Lifetime} + 1)$.

4. RESULTS AND DISCUSSIONS

Table 2 displays descriptive statistics. The standard deviations of ESG are relatively low, with a high mean of 70.40% and a minimum of 32.69. This reflects the high performance of the legal framework of CSR in France. Our sample shows little high financial performance through 12.74% and 15.25% as means of ROA and ROE, with standard deviations equal to 0.2522 and 0.1742, respectively. Tobin's Q varies between 0.0103 and 1.2895, with an average of 0.5009. Thus, our sample is characterized by undervalued shares, which can be observed as a positive performance indicator of the future.

Table2: Descriptive statistics

Variable	Observation	Mean	Std. Dev.	Min.	Max.
ROA	540	0.127	0.252	-0.172	0.887
ROE	540	0.153	0.174	-0.814	0.524
Q	540	0.501	0.400	0.010	1.289
ESG	540	70.402	13.153	32.690	94.320
L	540	0.209	0.141	0.007	0.758
S	540	16.966	1.474	13.986	21.6330
M	540	2.080	1.659	0.120	14.890
G	540	0.002	0.029	-0.079	0.023
A	540	4.070	0.757	2.197	5.875

Descriptive statistics of control variables show that firms of our sample are moderately large (mean size: 16.96 with little standard deviation of 1.4747), (mean Lev: 0.2098 with little standard deviation of 0.1408), have experienced low figures of MTB ratios as undervaluation indicator (mean MTB: 2.0803 with a little standard deviation of 1.6586), are affected by low economic growth (mean GDP: 0.24% with a little standard deviation of 0.0294), and are relatively young (mean Age: 4.07, with little standard deviation of 0.7572). Correlations between

dependent and explanatory variables are studied through two tests: a descriptive test (Correlation Matrix) and a hypothesis test (VIF “variance inflation factor” test). Table 3 displays Pearson correlation coefficients between dependent and explanatory variables.

Correlations between explanatory variables (independent and control variables) vary from -0.1692 to 0.3514. All correlations are at a low level. So, a priori explanatory variables are not mutually correlated, and we can introduce all of them in our regression model.

Table 3: Correlation Matrix for dependent and all explanatory variables

	ROA	ROE	Q	CSR	L	S	M	G	A
ROA	1.000								
ROE	0.650	1.000							
Q	0.230	0.283	1.000						
CSR	0.063	-0.038	0.073	1.000					
L	-0.076	-0.149	-0.049	0.081	1.000				
S	-0.065	-0.199	-0.162	0.351	-0.031	1.000			
M	0.249	0.335	0.181	-0.169	-0.211	-0.212	1.000		
G	0.057	0.009	0.009	-0.122	-0.143	-0.025	0.076	1.000	
A	0.070	-0.058	0.026	0.311	-0.025	0.384	0.024	-0.028	1.000

In addition, correlations between dependent variables and explanatory variables are not at a high level. Thus, we can expect no correlation between CSR and CFP and control variables.

By applying a Multivariate analysis, first, using the Fisher test, we tested the specification model of panel data through the Homogeneity test. Second, we tested for specification effects type (fixed or random effects). Third, we have controlled residual autocorrelation. Then, we tested and controlled the heteroscedasticity problem. Finally, we obtained econometric data analysis using the GLS regression model. Table 4 delays the outcomes of the Fisher test, which is used to check if the data presents variability in two dimensions, firm and year, so whether the panel data form is justified or not.

Table 4: Fisher & Hausman tests

Regression Model	F- statistic	P- Value	Chi-2 statistic	P- Value
Regression Model 1 (ROA)	29.750	0.000	15.550	0.016
Regression Model 2 (ROE)	58.940	0.000	43.300	0.000
Regression Model 3 (TOBIN'S Q)	8.850	0.000	4.130	0.658

The Fisher test states that P-values are all below 5% confidence level. We, therefore, conclude that our regression model is heterogeneous, and the panel data form is appropriate. The Hausman test is used to specify existing individual effects. It allows one to choose whether the regression model shows fixed effects (identical for all individuals in the sample) or random effects (varies from individual to another) between dependent and explanatory variables. Table 4 also delays the outcomes of the Hausman test. The findings of the Hausman test show that regression models 1 (ROA) and 2 (ROE) have a probability lower than 5%, so fixed effects. However, regression model 3 (TOBIN'S Q) has a probability greater than 5%, so random effects. Wooldridge test results are displayed in Table 5.

Table 5: Wooldridge test results

Regression Model	F- statistic	P- Value
Regression Model 1 (ROA)	6.798	0.011
Regression Model 2 (ROE)	29.300	0.000
Regression Model 3 (TOBIN'S Q)	8.204	0.006

The findings of the Wooldridge test show that all regression models are characterized by residual autocorrelation. Thus, the GLS regression method is employed rather than the OLS method to fix the residual autocorrelation problem. Results of the Breusch-Pagan test to control for heteroscedasticity are displayed in Table 6.

Table 6: Breusch-Pagan test results

Regression Model	Chi-2 statistic	P- Value
Regression Model 1 (ROA)	51.180	0.000
Regression Model 2 (ROE)	65.820	0.000
Regression Model 3 (TOBIN'S Q)	0.020	0.901

Based on the results above, we conclude that only regression model 3 (TOBIN'S Q) does not show the Heteroscedasticity problem. Thus, the White method estimates the remaining 1 (ROA) and 2 (ROE) in the corrected version. Because of residual autocorrelation and heteroscedasticity problems, the GLS regression method is employed to estimate the coefficient of three separate regression models of CPF measures (ROA, ROE, and TOBIN'S Q). Each regression model was estimated on four CSR measures as a sensitive test. Each of the three score components of CSR (SCE, SCS, and SCG) and the global one combines them, ESC score. Thus, we tested twelve (12) regression models whose results are displayed in Tables 7, 8, and 9.

Table 7: Regression for CSR and ROA

Regression Model	1 (ESC)	1a (SCE)	1b (SCS)	1c (SCG)
Variables	ROA	ROA	ROA	ROA
CSR	0.002*** (0.007)			
Score_env		0.000 (0.431)		
Score_soc			0.002** (0.011)	
Score_gov				0.001** (0.017)
Lev	-0.052 (0.495)	-0.051(0.511)	-0.032 (0.673)	-0.031(0.690)
Size	-0.013* (0.097)	-0.010 (0.214)	-0.011 (0.156)	-0.009 (0.231)
MTB	0.037*** (0.000)	0.035***(0.000)	0.035*** (0.000)	0.037*** (0.000)
GDP	0.419 (0.243)	0.320 (0.373)	0.394 (0.272)	0.459(0.205)
Age	0.019 (0.215)	0.028*(0.068)	0.023(0.135)	0.019 (0.213)
_cons	0.045 (0.729)	0.089 (0.491)	0.035 (0.789)	0.064 (0.620)
Number of firms	60	60	60	60
Number of Observations	540	540	540	540
Prob > chi2	0.000	0.000	0.000	0.000

Note: *, **, *** indicates significance at 10%, 5% and 1%, respectively.

Table 7 shows that the CSR (ESG) coefficient is positively related to CFP and significant at the 99% confidence level. The overall model is significant at the 99% confidence level. More precisely, for every one-unit increase in CSR, ceteris paribus, ROA increases by 0.0023617. This provides evidence of a significant difference in CFP between firms highly involved in CSR events and others. This result confirms the conclusions of preceding studies. In addition, two control variables, firm size and overvaluation (MTB ratio), are significantly associated with CFP, which provides evidence that a positive correlation between CSR and CFP can be found when controlling the effect of other variables on CFP.

For regression models in which we introduced each CSR score component separately, SCS (score of social dimensions) and SCG (score of governance dimension) have a positive impact on CFP and are significant at the 95% confidence level. However, SCE (score of environmental dimensions) does not significantly impact the CFP.

Table 8: Regression for CSR and ROE

Regression Model	2 (ESC)	2a (SCE)	2b (SCS)	2c (SCG)
Variables	ROE	ROE	ROE	ROE
CSR	0.001*(0.058)			
Score_env		-0.000 (0.417)		
Score_soc			0.001*** (0.001)	
Score_gov				0.000 (0.696)
Lev	-0.127** (0.013)	-0.112** (0.032)	-0.115** (0.023)	-0.119** (0.019)
Size	-0.019*** (0.001)	-0.015*** (0.008)	-0.019*** (0.000)	-0.016*** (0.002)
MTB	0.031*** (0.000)	0.030*** (0.000)	0.031*** (0.000)	0.030*** (0.000)
GDP	-0.134(0.576)	-0.180 (0.451)	-0.117(0.622)	-0.165 (0.495)
Age	-0.008(0.451)	-0.004(0.750)	-0.009(0.418)	-0.004 (0.665)
_cons	0.383*** (0.000)	0.403*** (0.000)	0.357*** (0.000)	0.401*** (0.000)

Number of firms	60	60	60	60
Number of Observations	540	540	540	540
Prob>chi2	0.000	0.000	0.000	0.000

Note: *, **, *** indicates significance at 10%, 5% and 1%, respectively.

Table 8 shows that the CSR (ESG) coefficient positively impacts CFP, as measured by ROE, and is significant at the 90% confidence level. The overall model is significant at the 99% confidence level. More precisely, for every one-unit increase in CSR, ceteris paribus, ROE increases by 0.00111. This also lets us confirm previous studies' findings regarding CSR's positive effect on CFP. For control variables, the firm's size is negatively and significantly associated with CFP. However, overvaluation (MTB ratio) has a positive and significant correlation with CFP. This confirms that the effect of other explanatory variables on CFP is well controlled. For regression models in which we introduced each CSR score component separately, only SCS (score of social dimensions) was positively related to CFP and significant at the 99% confidence level. Controlling variables, Leverage (Lev) and Firm's size (Size), negatively affected CFP and were significant at 95% and 99% confidence levels, respectively. However, overvaluation (MTB ratio) has a positive and significant impact, at a 99% confidence level, on CFP.

Table 9: Regression for CSR and TOBIN'S Q

Regression Model	3 (ESC)	3a (SCE)	3b (SCS)	3c (SCG)
Variables	TOBIN'S Q	TOBIN'S Q	TOBIN'S Q	TOBIN'S Q
CSR	0.005*** (0.000)			
Score_env		0.002* (0.052)		
Score_soc			0.003*** (0.002)	
Score_gov				0.0017529** (0.040)
Lev	-0.096 (0.432)	-0.118 (0.346)	-0.056 (0.648)	-0.057 (0.642)
Size	-0.056*** (0.000)	-0.053*** (0.000)	-0.051*** (0.000)	-0.047*** (0.000)
MTB	0.038*** (0.000)	0.034*** (0.001)	0.034*** (0.001)	0.036*** (0.001)
GDP	0.107 (0.851)	-0.098 (0.864)	0.046 (0.936)	0.093 (0.873)
Age	0.027 (0.272)	0.044* (0.070)	0.035 (0.148)	0.033 (0.178)
_cons	0.935*** (0.000)	1.029*** (0.000)	0.921*** (0.000)	0.992*** (0.000)
Number of firms	60	60	60	60
Number of Observations	540	540	540	540
Prob>chi2	0.000	0.000	0.000	0.000

Note: *, **, *** indicates significance at 10%, 5% and 1%, respectively.

Table 9 shows that the CSR (ESG) coefficient positively impacts CFP and is significant at the 99% confidence level. More precisely, for every one-unit increase in CSR, ceteris paribus, Tobin's Q increases by 0.004863. This also lets us confirm previous studies' findings regarding CSR's positive effect on CFP.

Similarly, for the control variables, the firm's size is negatively and significantly associated with CFP. However, overvaluation (MTB ratio) has a positive and significant effect on CFP. For regression models in which we introduced each CSR score component separately, all components, SCE (score of environmental dimensions), SCS (score of social dimensions), and SCG (score of governance dimension), positively impact Tobin's Q and significant at the 99%, 99% and 95% confidence levels, respectively. The firm's size is negatively and significantly associated with CFP in all these regression models. However, overvaluation (MTB ratio) has a positive and significant effect on CFP. Firm age is positively and significantly associated with CFP only in the SCE (score of environmental dimensions) regression model. Based on regression models, CSR positively and significantly correlates with CFP, whether ROA, ROE, or TOBIN'SQ measure the latter.

Our paper uses the GLS method to estimate regression models that explain the possible association between CSR, other control variables, and three different CFP metrics: return on assets (ROA), return on equity (ROE), and Tobin's Q. Our research shows that French companies that engage in socially responsible activities experience a significant increase in their return on assets (ROA). This suggests that CSR positively and meaningfully impacts CFP. Specifically, we found that increasing CSR by one unit leads to an increase of 0.0023617 in ROA. Results support the hypothesis that CSR enhances financial performance, consistent with previous studies by Cornett et al. (2016) and Rhou et al. (2016).

As part of our sensitivity analysis, we considered the potential biases that could arise from using proxies for the variables in our study. This has been a significant criticism of previous studies. To address this, we ran our basic regression using two alternative measures of the CFP: ROE and TOBIN'S Q. These regressions showed the same results, thus confirming the positive relationship of my CSR with the CFP. In addition, our results are robust due to the appropriate CSR measure used, which combines three dimensions of social responsibility. This is unlike some prior studies that relied on a simple proxy.: 1) a content analysis used to detect CSR disclosures from annual reports in order to determine only whether the firm had paid attention to CSR or not, 2) a dummy variable where a value of 1 is attributed to firms included in the Index and a value of 0 is used for others, 3) a simple rank based on various dimensions of social performance, as generated by specific indices, or classified using surveys by faculty members or students.

CONCLUSIONS

Our research aimed to investigate how CSR affects CFP. We used different measures of CFP to make our results more accurate. Our findings show that the CFP of French-listed companies is positively affected by their involvement in activities based on social responsibility, regardless of whether we used ROA, ROE, or Tobin's Q. This confirms our hypothesis and supports previous studies that found a positive correlation between CSR and CFP. Our research contributes to resolving the lack of agreement on this relationship. Additionally, we discovered that the lack of agreement on the connection between CSR and CFP is not due to the choice of proxy for the dependent or independent variable. To further investigate the relationship between CSR and CFP, future research should consider the effects of moderating or mediating factors and examine whether CSR has a short-term or long-term effect on CFP.

Our results have validated France's focus on activities based on social responsibility. This is further supported by the new regulations that mandate participation in CSR activities. Our findings demonstrate that socially responsible activities offer various benefits, including improved financial performance and a positive contribution towards sustainable development.

Acknowledgement

This work was funded by the University of Jeddah, Jeddah, Saudi Arabia, under grant No. (UJ-23-SHR-64). Therefore, the authors thank the University of Jeddah for its technical and financial support.

REFERENCES

- [1] Tariq, S., Najabat, A., Javid, A. and Ali. R. (2022). Corporate Governance and Firm's Financial Performance Nexus. *Journal of Xidian University*. Vol. 16, ISSU. 9. pp. 121-138. 10.37896/jxu16.9/009.
- [2] Filippi, M (2020). Do French agrifood co-ops have a head start in Corporate Social Responsibility? An initial examination of French co-ops and their practices. *Rev Agric Food Environ Stud* **101**, 489–506. <https://doi.org/10.1007/s41130-020-00131-x>.
- [3] Demaria, S., & Rigot, S. (2021). Corporate environmental reporting: Are French firms compliant with the recommendations of Task Force on Climate Financial Disclosures? *Business Strategy and the Environment*, *30*(1), 721-738.
- [4] Dahlsrud, A. (2008) How Corporate Social Responsibility Is Defined: An Analysis of 37 Definitions. *Corporate Social Responsibility and Environmental Management*, *15*, 1-13. <http://dx.doi.org/10.1002/csr.132>.
- [5] Carroll, Archie B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review* *4.4*, pp. 497-505.
- [6] Graves, S. B., & Waddock, S. A. (1999). A look at the financial-social performance nexus when quality of management is held constant. *International Journal of Value-Based Management*, *12*, 87-99.
- [7] DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, 147-160.
- [8] Surroca, J., Tribó, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic management journal*, *31*(5), 463-490.
- [9] Crisóstomo, V. L., de Souza Freire, F., & De Vasconcellos, F. C. (2011). Corporate social responsibility, firm value and financial performance in Brazil. *Social responsibility journal*, *7*(2), 295-309.

- [10] Chetty, S., Naidoo, R., and Seetharam, Y. (2015). The Impact of Corporate Social Responsibility on Firms' Financial Performance in South Africa. *Contemporary Economics*, June 30, 2015, Vol. 9, No. 2, pp. 193-214.
- [11] Ardi, G., Robiyanto, R., Gatot, S., and Huruta, A.D. (2021). Determinants of Corporate Social Responsibility: Empirical Evidence from Sustainable and Responsible Investment Index. *Quality - Access to Success*, 22, pp 55-61.
- [12] Brunton, M., Eweje, G., & Taskin, N. (2017). Communicating Corporate Social Responsibility to Internal Stakeholders: Walking the Walk or Just Talking the Talk? *Business Strategy and the Environment*, Volume 26, Issue 1, January 2017, pp 31-48.
- [13] Wang, H., Choi, J., Wan, G., and Dong, J.Q. (2016). Slack resources and the rent-generating potential of firm-specific knowledge/ *J. Manage*, 42, pp. 500-523.
- [14] Ta, H.T.T., and Bui, N.T. (2018). Effect of corporate social responsibility disclosure on financial performance. *Asian Journal of Finance & Accounting*, Vol. 10, No. 1, pp.40-58.
- [15] Stanwick, P. A., & Stanwick, S. D. (1998). The relationship between corporate social performance, and organizational size, financial performance, and environmental performance: An empirical examination. *Journal of business ethics*, 17, 195-204.
- [16] Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic management journal*, 18(4), 303-319.
- [17] McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of management Journal*, 31(4), 854-872.
- [18] Wang, M., & Chen, Y. (2017). Does voluntary corporate social performance attract institutional investment? Evidence from China. *Corporate Governance: An International Review*, 25(5), 338–357. <https://doi.org/10.1111/corg.12205>.
- [19] McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification?. *Strategic management journal*, 21(5), 603-609.
- [20] Buchanan, B., Cao, C.X., and Chen, C. (2018). Corporate social responsibility, firm value, and influential institutional ownership. *Journal of Corporate Finance*, Volume 52, 2018, pp 73-95.
- [21] Zhu, Y., Sun, L. Y., & Leung, A. S. (2014). Corporate social responsibility, firm reputation, and firm performance: The role of ethical leadership. *Asia Pacific Journal of Management*, 31, 925-947.
- [22] Castka, P., Bamber, C. J., Bamber, D. J., & Sharp, J. M. (2004). Integrating corporate social responsibility (CSR) into ISO management systems—in search of a feasible CSR management system framework. *The TQM magazine*, 16(3), 216-224.
- [23] Chan, C. Y., Chou, D. W., & Lo, H. C. (2017). Do financial constraints matter when firms engage in CSR?. *The North American Journal of Economics and Finance*, 39, 241-259.
- [24] Cornett, M.M., Erhemjamts, O., and Tehranian, H. (2016). Greed or good deeds: An examination of the relation between corporate social responsibility and the financial performance of U.S. commercial banks around the financial crisis. *Journal of Banking & Finance*, Volume 70, September 2016, pp 137-159.
- [25] Rhou, Y., Singal, M., and Koh, Y. (2016). CSR and financial performance: The role of CSR awareness in the restaurant industry. *International Journal of Hospitality Management*, Volume 57, August 2016, pp 30-39.
- [26] Oh, W.Y., Cha, J., and Chang, Y.K. (2017). Does Ownership Structure Matter? The Effects of Insider and Institutional Ownership on Corporate Social Responsibility. *Journal of Business Ethics*, volume 146, 1, pages 111–124.
- [27] Bassen, A., Friede, G., and Busch, T. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5:4, pp 210-233.
- [28] McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial economics*, 27(2), 595-612.
- [29] Brealey, R.A. and Myers, S.C. (2003), *Principles of Corporate Finance*, International Edition, 7th ed, McGraw-Hill, New York.
- [30] Nachum, L. (2019). 16. How much social responsibility should MNEs strategically assume and of which kind?. *Socially responsible international business: Critical issues and the way forward*, 433.
- [31] Aras, G., & Crowther, D. (2009). Corporate sustainability reporting: a study in disingenuity?. *Journal of business ethics*, 87, 279-288.

DOI: <https://doi.org/10.15379/ijmst.v10i2.2907>

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0/>), which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.