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Environmental, social and governance ratings and firm performance: The moderating role of internal control quality

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Abstract

Despite the burgeoning interest in environmental, social and governance (ESG) ratings, current results regarding ESG rating-performance relationship are inconclusive. Since what affects this disagreement is ambiguous, we examine how internal control weaknesses (ICW) may affect the relationship between ESG rating and a firm's performance. In fact, employing a sample of French listed firms during the period between 2012 and 2018, we predicted and found that both ICW and ESG ratings have a positive and significant influence on a firm's performance. In addition, the results indicate that ICW negatively and significantly moderates the relationship between ESG ratings and corporate performance. Moreover, the robustness of the results is checked through the generalized method of moments regression. We also offer theoretical and practical implications to drive policymakers and businesses to assure sustainable development. We expect that our study can help managers to strengthen their internal resources, such as the internal control (IC) and ESG ratings to improve a firm's performance.

KEYWORDS
corporate social responsibility, environmental, firm's performance, internal control weaknesses, social and governance ratings, stakeholder engagement, sustainable development

1 | INTRODUCTION

Recently, the incorporation of environmental, social and governance (ESG) information by investors and financial analysts in trading decisions is considered one of the major advances in financial markets (Adomako and Tran, 2022; Alcaide González et al., 2020; Ali et al., 2020; Alshbili et al., 2020, 2021; Alshbili & Elamer, 2019; Christensen et al., 2022; Elmagrhi et al., 2019). For instance, it is estimated that about $30 trillion is financed by employing sustainable plans that employ ESG rating in financing analyzes and portfolio choices (GSIA, 2018). Notwithstanding this increased interest, there is little research regarding the role of internal control, ESG rating and firm's financial performance. Therefore, our work is intended to contribute to the current debate by examining how internal control weaknesses (ICW) may influence the relationship between ESG ratings and firm's performance in France.

Meanwhile, regulations require companies to enhance their social and environmental performance assessed through ESG ratings (Briones Peñalver et al., 2018; Guerrero-Villegas et al., 2018; Javed et al., 2020; Kong et al., 2020; Meier & Cassar, 2018). While there are several growing CSR practices, there are instances where corporations do greenwashing (Hassan et al., 2021). These considerations prompt researchers to extend the realization of the impact of corporate social responsibility (CSR) on performance by contemplating that merely investing in CSR activities is not enough to improve performance, acknowledging that a more inclusive position must be established. In this vein, the literature suggests that participation in sustainable development practices signals

the wealth of companies (Eccles et al., 2014) and enhances their relationships with external stakeholders by improving performance (Barnett & Salomon, 2012). However, CSR practices entail expenses that can result in a competitive burden for companies compared to their rivals (Barnett & Salomon, 2012). However, despite the abundant research on the connection between CSR and performance, previous work, such as those of Garay and Font (2012) and Lahouel et al. (2019), have found mixed results, which can be explained by taking into account the endogeneity problem. It is for this reason that generalized method of moments (GMM) is necessary to remedy the endogeneity biases of the variables. Moreover, it is clear from the stakeholder theory that the effect of CSR on performance can be inconclusive since external stakeholders can reward companies that are successful in CSR practices, but their response does not influence performance when companies perform poorly. In other words, the costs of CSR are not outweighed by gains. However, firms with poor CSR practices can even be punished by external stakeholders, whose adverse opinions toward these companies can adversely affect performance (Carlos & Lewis, 2018). Therefore, in this work, we intend to help fill this gap by examining the effect of IC as well as CSR on performance. In fact, the importance of CSR has raised the necessity for doing business, deliberately integrating social environmental and economic concerns into the business action (Hernández et al., 2020). Besides, ample research has paid a lot of consideration to CSR, which is considered to be a significant issue (Xu et al., 2018). While companies have the right to seek to sell their products, they do have a certain ethical responsibility (Hou, 2019). Research has also shown that CSR performance is well documented worldwide and that its frontiers are commonly widening (Hickle, 2017). In fact, currently, it is extremely crucial for companies as it pays great attention to the environment (Arrive et al., 2019). While businesses have focused so far on profit-maximization, now, they are shifting to work on sustainability (Kraus et al., 2018).

Although several papers highlighted that internal control (IC) has a significant act in enhancing the reliability of financial reporting and corporate performance (Cheng et al., 2013; Sun, 2016), its role in moderating the ESG rating and the firm's performance relationship is not explored. Therefore, in this article, we have examined the impact of ICW as well as that of CSR on listed French firms' financial performance belonging to the SBF 120 index. The core of this performance is to express how company profitability is for a particular financial period. It is, therefore, crucial to study the interaction between ICW and CSR on financial performance in the French context. This need arises from two structural shortcomings. First, there is a scarcity of research findings on the issue in France, particularly, in the situation of companies belonging to the SBF 120 index. Second, the literature that identified the five components of IC did not include CSR in the model using the GMM method analysis technique. Moreover, most earlier research works had examined only item answers on each of the elements or tried to integrate responses into an ANOVA model, which exclusively tracks the dynamics of including CSR variables into the GMM model.

Then, our paper emphasizes the French background by delving into the challenges of the ESG score and internal control in the context of firms listed on the SBF 120 index, which have become an appealing institutional venue for empirical evidence due to several reasons. First, the CSR efficiency may vary among nations based on the country-specific setting (Cormier & Magnan, 2007). Therefore, our empirical findings found a new institutional environment considering that first, prior empirical research has focused particularly on international evidence and other countries (Reverte, 2009). Second, France is one of the few nations to have enacted regulations forcing environmental and social information disclosure (Chauvey et al., 2015). Third, our analysis starts with the year 2012, when the Grenelle II Act began to be applied. It extended the nonfinancial disclosure structure proposed by the New Economic Regulations (NER) Act, which called the registered firms to reveal major gages of nonfinancial performance concerning the environmental, sustainability and social behaviors in annual reports. This regulation enforces fines for nonconformity (Chelli et al., 2014). Additionally, examining the time in the wake of the first mandatory offers much richer and more widespread information on CSR disclosure (Reverte, 2009). Therefore, our current study may be expected to contribute to the current literature in the following ways. First, the results obtained by the means of the GMM regression indicated a positive and significant connection between ICW, CSR, and the company's performance. Moreover, they emphasized the advantages of a strong IC system beyond mere compliance with the law. Furthermore, this study may contribute to previous studies by noting that French companies should become more committed to the integrity of ethical values, competence, and social responsibility, in addition to the progress of control actions over the technology engagement and procedures and policies standardization that approve, verify and reconcile transactions. Third, this article may contribute to broader research questions about the impact of IC while previous studies have focused mainly on the weaknesses of IC as a whole. However, this work gave mixed results and did not address the impact of IC weaknesses as well as CSR. SOX 404 demands management to utilize a framework to assess the effectiveness of IC. Since most companies use the COSO IC framework, we try to investigate the effect of both the ICW and CSR on the performance of companies which, to the best of our knowledge, has not been investigated in the French context. We also add to the research by emphasizing the role of IC in improving operational efficiency whereas the existing research on IC concentrates more on how limitations in IC influence the reliability of financial reporting. Moreover, our study sheds further light on the effect of the quality of both the IC and the CSR since a weak IC system reduces operational efficiency, which translates into poor financial performance.

As a consequence, the remaining part of this article is structured as follows; the Section 2 presents a literature review and the hypothesis formulation, the Section 3 explains the adopted methodology then, the Section 4 discusses the results of the regression model relating to the determinants of corporate performance and finally Section 5, the conclusion is presented and future avenues of research are suggested.

2 | LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 | The effect of internal control on the firm's financial performance

SOX section 404 concentrates on reliable financial reporting but reveals nothing about operational efficiency. However, as COSO argues, a good

IC system should lead not only to trustworthy financial reporting but also to operational efficiency. Therefore, to achieve this goal, we need a management control system based on an efficient accounting system that should affect the control of resources and business processes beyond strategic planning and control. More precisely, an accounting system centered on an efficient IC system should be incorporated into business processes to attain operational efficiency. Ultimately, business processes that are efficient lead to the achievement of the objectives or goals stated in the strategic plan, involving financial goals, such as return on investment and profits. In this vein, previous research studies have shown that a weak IC system can facilitate for-profit management and financial reporting restatements (Ashbaugh-Skaife et al., 2007; Doyle et al., 2007; Järvinen & Myllymäki, 2016). Operational efficiency will lessen the necessity for management to control profits. The IC, COSO definition achieves three goals, which involve three categories of risks that must be monitored by the IC system, namely operational risk, information risk, and compliance risk. The control of operational risk is the most crucial for the way companies obtain competitive advantages and conduct and manage their business processes (McAfee & Brynjolfsson, 2008; Simons, 1990). Nowadays, a large part of the processes within companies rely on technology to achieve their objectives (Barua et al., 1995; Bharadwaj et al., 1999) and the reliability of information depends on good control of the IT system to achieve goals. Therefore, IT controls have an immediate effect on the creation of value for companies (Masli et al., 2010). This reasoning explains why COSO unequivocally associates IC with operational efficiency. In addition, the link between the IC system and the performance of the company is evident as the weakness of this system affects the performance of the company. According to Jensen (2003), the IC system is intended to improve financial performance by increasing the sense of responsibility of information providers within an organization. Moreover, previous studies have shown that a weak IC system can affect the reliability of financial reporting (Costello & Wittenberg-Moerman, 2011; Järvinen & Myllymäki, 2016; Klamm & Watson, 2009). The IC system contributes to the improvement of operational efficiency and the strengthening of the company's strategy. Thus, as an integral part of organizational control, IC notably plays a crucial role in influencing the behavior of members of the company, as its efficiency is based on its ability to prevent risks at all levels of the organization and reduce those that are likely to degrade performance. In addition, one of the rare studies (Jokipii, 2010), carried out among 741 Finnish companies and focusing on the determinants of the IC system, based on a contingent approach, shows that this system ensures improved performance of the company.

The main focus of the study is on the lack of enterprise management induced by low-level IC. In an empirical examination of 261 companies with IC faults reported by the Securities and Exchange Commission, Ge and Mcvay (2005) discovered that control points prone to large difficulties had more complex business processes and lower profitability. Their findings were also validated by Kim and Park (2009) and other researchers. More and more research on the favorable benefits of IC on businesses has been recently undertaken. For their part, Brown et al. (2014) suggested that by decreasing unintentional accounting errors or deliberate accounting manipulation, a good IC system can enhance the quality of internal data information or internal management reporting.

Stoel and Muhanna (2011) examine the relationship between information technology (IT) internal control weaknesses (ICWs) and both accounting earnings (a real-time measure of a company's performance) and the market value (a forward-looking, risk-adjusted measure of a firm's performance). Their results showed that companies with an ICW IT have lower accounting earnings than those with strong IT internal control, according to a dataset that provides audited annual assessments of the effectiveness of both IT and non-IT internal control for a cross-section of companies as mandated by the Sarbanes-Oxley Act of 2002.

Many studies have looked into the possible causal links between each component of the IC system and performance (Jokipii, 2010). As a result, a powerful IC system should lead to increased operational efficiency and the achievement of corporate goals. According to previous research, a weak IC system leads to less reliable financial reporting (Ashbaugh-Skaife et al., 2007; Costello & Wittenberg-Moerman, 2011; Doyle et al., 2007; Järvinen & Myllymäki, 2016; Klamm & Watson, 2009), affects the cost of equity and business value (Ashbaugh-Skaife et al., 2009; Li et al., 2016; Sun, 2016). The following hypothesis has been proposed.

Hypothesis 1. *Internal control weaknesses have a negative impact on a firm financial performance.*

2.2 | The effect of CSR practice on firm financial performance

CSR is recognized as a concept encompassing ethical, economic, philanthropic and legal, aspects (Carroll, 1999). Based on stakeholder theory (Freeman et al., 2004), CSR is the strategic orientation of companies, capable of implementing environmentally and socially responsible practices while pursuing their economic objectives (Para-González et al., 2020; Russo & Perrini, 2010; Schons & Steinmeier, 2016; Story & Castanheira, 2019; Uyar et al., 2021), taking all stakeholders and trying to create value for them (Freeman et al., 2004). Stakeholder pressure is one of the main reasons companies address CSR practices (Iyer & Jarvis, 2019). The theory indicates that the stakeholders control the resources that are crucial to businesses, and so the relationships built with them must be efficiently managed in order to guarantee profitability (Salancik & Pfeffer, 1978; Wang et al., 2016; Wang et al., 2020). As a result, businesses should limit the negative environmental externalities of their operations (De Grosbois, 2012). Moreover, the stakeholders who are conscious of their commitment tend to reward the enterprises that demonstrate a good effect on the environment. Therefore, CSR is a strategy for firms to create relationships with their stakeholders.

Companies, in particular, boost the market prospects by minimizing the costs of transaction (Barnett & Salomon, 2012) and improving both productivity (Kim et al., 2017) and customer satisfaction (Servaes & Tamayo, 2013). These beneficial benefits, in turn, boost performance.

However, stakeholders must believe that corporate CSR practices are credible (Guix et al., 2018; Roberts et al., 2021; Warmate et al., 2021). They do not react to corporations' CSR operations which are not viewed as trustworthy and beneficial to society. Moreover, stakeholders may have negative sentiments about the corporations the claims of which do not correspond to concrete results in socially responsible actions. Customers, for instance, may no longer be trustworthy to the company (Carlos & Lewis, 2018). Therefore, inadequate levels of CSR might raise reputational problems, in addition to the cost of implementation. This suggests that CSR has both costs and benefits for businesses, and that simply conducting social activities is not enough to improve performance. As a result, the idea of CSR that optimizes the advantages above the costs generated by such actions is an important one to investigate. This link has already been studied in the context of tourism and hospitality, with varied results (Franco et al., 2020).

While earlier research has identified a positive or negative relationship between CSR and performance, few articles have attempted to realize that both elements can characterize this relationship. The existing research has helped define potential ways for CSR to affect financial performance, particularly by categorizing CSR into multiple aspects. However, the conflicting results showed that taking into account both the positive and negative links between CSR and performance is an important gap that has to be addressed. In this vein, Font and Lynes (2018) stated in one of the few research studies they conducted that the relationship between CSR and performance would follow a pattern. The reason is that CSR has a favorable impact on performance to the point where the expenses outweigh the benefits. However, this reasoning ignores the possibility that stakeholders will be more inclined to reward the corporations that produce extremely high CSR achievements even if these results come at a financial cost.

For their part, Kraus et al. (2020) used data from 297 large industrial enterprises in Malaysia to study the impact of CSR on environmental performance. Their findings showed that while CSR has no direct impact on the environmental performance, it is positively correlated with green innovation and environmental strategy both of which enhance the environmental performance, implying that they significantly act as a mediator between CSR and environmental performance. Moreover, the role of the CEO's integrity and the business's reputation in the relationship between CSR disclosure and corporate performance was investigated by Pham and Tran (2020). Furthermore, the results of an analysis of 3588 firm-year observations of 833 fortune world's most admired businesses in 31 countries from 2005 to 2011 revealed that CSR disclosure has a favorable impact on corporate reputation, which in turn considerably contributes to financial performance. According to the findings, the CEO's integrity considerably enhances the favorable impact of CSR disclosure on corporate reputation. Three indicators of business financial success (ROA, ROE, and Tobin's Q) and three proxies of CEO's honesty all showed similar outcomes. The research also explained how a company's reputation and CEO's honesty affect the benefits of CSR disclosure to the firm's performance and how not taking these elements into account could explain why prior studies' findings were inconsistent. On the other hand, in the global energy sector, Shahbaz et al. (2020) examined the relationship between the board of directors' qualities and CSR engagement, in addition to the relationship between corporate performance and CSR engagement.

In addition, only a few studies have looked at the energy sector's social performance (Lu et al., 2019; Valor, 2012). Energy businesses work on lowering negative externalities, according to Valor (2012). (health, safety, and the environment). Lu et al. (2019) discovered that CSR can help reduce corruption at the company level in the energy sector. Companies that produce renewable energy contribute to a country's long-term development. Governments encourage people to cut less carbon-intensive fuels and take action to combat climate change (Moseñe et al., 2013). Another study looked at CSR practices in the renewable energy industry (Chaiyapa et al., 2018).

Furthermore, CSR provides businesses with a competitive advantage over their rivals (Hasan et al., 2018). As a result, the market position will be strengthened, and profitability and performance will improve. Investors reward companies that are socially and ecologically responsible with a greater market valuation (Kong et al., 2014; Lo & Sheu, 2007; Rodgers et al., 2013). Investing in environmentally friendly methods can also boost operational efficiency (Jo et al., 2015). Another viewpoint contends that allocating scarce resources to CSR initiatives may be at the expense of shareholders (Hasan et al., 2018). If there are agency issues, managers may overinvest in CSR activities, resulting in high CSR costs (Gregory et al., 2014), which can impair the company's profitability and value. Except during periods of low confidence, Petitjean (2019) was unable to find a meaningful association between environmental policies and financial success. However, several other researchers have found a link between financial performance and corporate social responsibility (Beck et al., 2018; Hasan et al., 2018; Jo et al., 2015; Kong et al., 2014; Lo & Sheu, 2007; Rodgers et al., 2013). Engagement in CSR practices, in particular, is favorably associated with firm performance. As a result, we make the following hypothesis in our study: CSR has a favorable effect on FP.

Hypothesis 2. *Corporate social responsibility has a favorable impact on financial performance.*

2.3 | The effect of the interaction between ICW and CSR practice on firm financial performance

For its part, China published the "IC provisions" in January 2014. However, there are flaws in the creation of IC, such as poor environmental IC management, a difficult internal audit function, insufficient personnel capacity, and so on (Yongming & Yini, 2017). According to research by Yongming and Yini (2017), incorporating CSR practices into a company's IC system improves IC operations and makes the IC system more efficient. According to some academics, there is a game going on between CSR and the firm's success in which CSR has an impact on the IC process, which affects financial performance (Yongming & Yini, 2017). Therefore, the question is how corporate social responsibility affects IC and performance. Nowadays, the direction of CSR's impact on corporate performance is unclear. Using data

from Shenzhen's A-share market listed manufacturing enterprises from 2010 to 2014, Yongming and Yini (2017) investigate the influence of the coupling interaction of IC and CSR on corporate performance from the perspective of stakeholders. The findings revealed that IC helps companies enhance their performance, but it is swayed by CSR. The company's responsibility to shareholders, as well as a government responsibility, plays a vital part in IC and has a favorable impact on corporate performance. Nowadays, the direction of CSR's impact on corporate performance is unclear. Using data from Shenzhen's A-share market listed manufacturing enterprises from 2010 to 2014, Yongming and Yini (2017) investigated the effect of coupling interaction with IC and CSR on corporate performance from the perspective of the stakeholders. The findings revealed that IC helps companies enhance their performance, but it is swayed by CSR. Company responsibility to shareholders, as well as a government responsibility, play a vital part in IC and have a favorable impact on corporate performance. Corporate responsibility to creditors, on the other hand, has a detrimental impact on the IC. Corporate duty to suppliers, employees, customers, and IC is not visible. Companies in the hospitality industry are increasingly investing in CSR to build strong ties with stakeholders while also improving their performance. CSR, on the other hand, both benefit and cost the focal company. Franco et al. (2020) investigate how CSR affects corporate financial performance, finding that CSR is a cost that only delivers significant rewards when it fosters strong relationships between organizations and their stakeholders. We can offer the following hypothesis based on what has been presented.

Hypothesis 3. *The relationship between CSR practice and corporate financial performance is moderated by ICW.*

3 | RESEARCH METHODOLOGY

This section presents the sample, the data collection, the used variables measurements and the model specifications.

3.1 | Sample selection

The research is conducted over a seven-year period, from 2012 to 2018, on a sample of French registered companies in the SBF 120 index. The choice of this index is justified by its representativeness and the SBF 120's broad, faithful, and diversified market view, which allows us to collect a sufficiently large population to conduct statistical tests. The study period begins from the date of the adoption of the Grenelle II law, which entered into force in 2012, to avoid any kind of controversy concerning the level of conservatism after the adoption of the new economic regulations (New Economic Regulations). Considering the initial population, we excluded the financial and real estate companies because of the sector specificities and the accounting regime of the credit institutions. Therefore, the final sample is made up of 98 companies covering a 7-year period for a total of 686 observations. The whole accounting and stock market information was extracted from the Thomson Reuters database (Datastream) and the Thomson Reuters ASSET4 ESG database.

3.2 | Variables measurements

3.2.1 | The dependent variable: The firm's financial performance

We utilize Tobin's Q as a proxy for business financial performance based on the prior studies of Stoel and Muhanna (2011), Pham and Tran (2020), and Shahbaz et al. (2020). Tobin's Q is calculated as (Market value + Preferred stock + Long-term debt)/Total assets (Lahouel et al., 2019).

3.2.2 | Measurement of the independent and control variables

This study used IC deficiency (ICW) as a proxy variable of the level of internal control quality where Internal control is a dummy variable coded 1 if the company discloses information on internal control weaknesses, and 0 if it does not (Doyle et al., 2007; Ashbaugh-Skaife et al., 2007; Stoel & Muhanna, 2011), Then, the data on the internal control weaknesses were manually collected from financial reports and reference documents published on the French listed companies' website. On the other hand, corporate social responsibility is measured with the ESG score retrieved from Thomson Reuters's ASSET4 ESG (Lahouel et al., 2019; Yang & Baasandorj, 2017). The company size corresponds to the logarithm of total assets (Karim et al., 2021; Sardana et al., 2020; Shahbaz et al., 2020; Singh & Misra, 2021). The long-term debt deflated by the ratio of the total assets is used to calculate LEV (Pham & Tran, 2020; Shahbaz et al., 2020). The change in total revenue deflated by total revenue is used to calculate growth (Stoel & Muhanna, 2011). If the corporation is audited by at least one firm in the BIG 4 network, BIG4 is a binary variable coded 1 (Chouaibi & Boulhaga, 2020; Stoel & Muhanna, 2011). We also included the company's age measured by the logarithm years of company establishment (Singh & Misra, 2021; Stoel & Muhanna, 2011; Wang et al., 2020).

3.3 | Model specification

In this study of the French context, we are interested in some organizational factors explaining the inter-company's disparities in the level of conservatism. Therefore, this developed model is written as follows:

$$\begin{aligned}\text{Tobin Q}_{it} = {} & \beta_0 + \beta_1 \text{ICW}_{it} + \beta_2 \text{FSIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{GROWTH}_{it} \\ & + \beta_5 \text{AGE}_{it} + \beta_6 \text{AUDTQ}_{it} + \text{Industry fixed effect} \\ & + \text{Firm fixed effect} + \varepsilon_{it}, \end{aligned} \quad (1)$$

TABLE 1 Descriptive statistics

Variables	N	Average	Standard deviation	Minimum	Maximum
Tobin Q	686	2.039	0.511	0.3271	2.473
ICW	686	0.588	0.492	0	1
ESG	686	51.122	29.833	12.77	91.76
ICW*ESG	686	33.775	35.042	0	91.76
FSIZE	686	15.824	2.121	9.964	19.458
LEV	686	0.2626	0.160	0.0002	0.804
GROWTH	686	0.0377	0.182	−2.482	0.955
AGE	686	64.361	57.745	9	353
AUDTQ	686	0.9620	0.191	0	1

$$\text{Tobin Q}_{it} = \beta_0 + \beta_1 \text{CSR}_{it} + \beta_2 \text{FSIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{GROWTH}_{it} + \beta_5 \text{AGE}_{it} + \beta_6 \text{AUDTQ}_{it} + \text{Industry fixed effect} + \text{Firm fixed effect} + \varepsilon_{it}. \quad (2)$$

To further study the impact of the interaction of IC and CSR on firm performance, this article adds the interaction of IC and CSR.

$$\text{Tobin Q}_{it} = \beta_0 + \beta_1 \text{ICW}_{it} + \beta_2 \text{CSR}_{it} + \beta_3 \text{IC} * \text{CSR}_{it} + \beta_4 \text{FSIZE}_{it} + \beta_5 \text{LEV}_{it} + \beta_6 \text{GROWTH}_{it} + \beta_7 \text{AGE}_{it} + \beta_8 \text{AUDTQ}_{it} + \text{Industry fixed effect} + \text{Firm fixed effect} + \varepsilon_{it}. \quad (3)$$

With Tobin's Q: financial performance, ICW: a dummy variable coded 1 if the corporation publishes information about IC weaknesses, and zero otherwise; CSR: measured by ESG score; SIZE corresponds to the logarithm of total assets (TA) for year t; LEV, is measured by the long-term debt / total assets ratio, GROWTH is calculated based on the change in the total revenue deflated by the total revenue; AGE is calculated based on the years of the company's existence; BIG4 is a variable that takes value 1 if the company is audited by at least one BIG 4 firm; To discover possible impacts that belong to the industry and the firm, industry and firm dummies are integrated; $\beta 0 \rightarrow \beta 9$: Constitute the parameters to be estimated; ε: Error term.

4 | RESULTS AND DISCUSSION

This part is devoted to the presentation of the results of statistical processing. First, we focus on the model descriptive statistics, then we present the analysis of the correlations between the variables and finish with the results of the regression model.

4.1 | Descriptive statistics

The analysis of our sample descriptive statistics (Table 1) revealed the following salient points: the mean value and the standard deviation of Tobin's Q are almost equal to the respective values; 2.039 and 0.511. Its minimum and maximum values are respectively equal to "0.3271" and "2.473". Regarding the independent variables, the average disclosure of information on IC weaknesses of the firms in our sample is around 0.588. The results also showed that on average, the companies in our sample disclose ESG information of around 51.12%. In this regard, and according to Table 1, the average interaction between ICW and CSR is 33.77.

4.2 | Correlation matrix

Table 2 presents the correlation matrix between the variables tested in the model. The correlation matrix indicates that most variables are related to each other in a significant way. The Tobin Q variable, for example, is significantly correlated at the 1% level with all the variables in the model. However, the intensity of these correlations is not considered excessive since the correlation coefficients do not exceed 0.8. To further ensure the absence of multicollinearity, we performed a multicollinearity diagnosis via STATA by the variance inflation factor (VIF) (an indicator of the proportion of variance of each independent variable explained by all the other variables). From Table 2, we notice that the VIF does not exceed 10, which leads us to conclude that there are no significant multicollinearity issues.

4.3 | Multivariate analyzes

Model 1 in Table 3 shows the results of the OLS regression. The results of the estimation show that the model has an explanatory and significant power R2 = 0.71 and R2 adjusted = 0.66.

The results of the regression presented in Table 3 show that IC has a positive effect on a firm's performance. Thus, the coefficient relating to this variable is positive (0.061) and significant ($p = 0.000$) at the 1% level. This allows us to reject the Hypothesis 1. This means that the quality of internal control is considered a potential determinant of financial performance in the French context. Therefore, profitable companies have managed to detect ICW before the publication of financial statements. This result invalidates the work of Stoel and Muhanna (2011) who found that weaknesses in IT internal control have a negative effect on company performance by interfering with the organizational capacity to meet essential information and systems

TABLE 2 Pearson's correlation and the VIF test

	Tobin Q	IC	CSR	FSIZE	LEV	GROWTH	AGE	AUDTQ	VIF
Tobin Q	1.000								
ICW	0.120***	1.000							3.95
ESG	0.529***	0.250***	1.000						2.91
FSIZE	0.519***	0.102***	0.463***	1.000					1.74
LEV	−0.204***	0.018	−0.091***	0.190***	1.000				1.22
GROWTH	−0.080**	−0.001	−0.178***	−0.131***	−0.023	1.000			1.05
AGE	0.167***	0.016	0.146***	0.201***	−0.042	−0.047	1.000		1.06
AUDTQ	0.148***	0.082**	0.133***	0.131***	−0.027	−0.065*	0.096***	1.000	1.04

Note: *, **, *** significant relationship at 10%, 5%, and 1% threshold.

TABLE 3 The impact of CSR and internal control on firm value

	(1) TBQ	(2) TBQ	(3) ICW = 1 TBQ	(4) ICW = 0 TBQ
ICW	0.061***			
	−2.00			
ESG		0.010***	0.011***	0.002***
		−6.23	−4.59	−2.8
FSIZE	0.152***	0.151***	0.177***	0.030*
	−5.17	−4.27	−11.53	−1.81
LEV	−1.357***	−1.283***	−1.192***	−0.466*
	(−4.78)	(−5.10)	(−3.40)	(−1.78)
Growth	−0.051	−0.06	0.079	−0.141
	(−0.86)	(−1.03)	−1.29	(−1.30)
ln_Age	0.354***	−0.043	−0.15	0.326**
	−3.78	(−0.54)	(−1.13)	−2.43
AUDTQ	0.393***	0.389***	0.727***	0.117**
	−2.66	−3.4	−4.37	−2.42
Industry fixed effect	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes
_cons	−1.404**	−0.718	−1.275***	0.473
	(−2.44)	(−1.30)	(−2.78)	−0.96
N	681	681	402	279
R-sq	0.71	0.76	0.73	0.9
Adj. R-sq	0.66	0.71	0.64	0.87

Abbreviations: AUDTQ, Audit quality; ESG, environmental, social, and governance; FSIZE, company size; GROWTH, is calculated based on the change in the total revenue deflated by the total revenue; ICW, internal control weaknesses; LEV, debt level; Ln_AGE, firm age. *, **, *** significant relationship at 10%, 5%, and 1% threshold.

needs reliable to conduct day-to-day operations and efficiently deliver customer service, management support and productivity gains.

Generally, the accounting and financial literature argue that financial performance has effects on the quality of IC. Indeed, companies are interested in internal control systems to improve their performance. In this context, most studies carried out in the American context showed that companies reporting ICW are more generally less efficient (Ashbaugh-Skaife et al., 2007; Doyle et al., 2007; Ge & McVay, 2005; Stoel & Muhanna, 2011). For example, Ge and McVay (2005) examined the factors likely to release ICW. They showed that underperforming companies are associated with greater disclosure of material IC weaknesses. Similarly, Doyle et al. (2007) and Ashbaugh-Skaife et al. (2007) showed that companies tend to be financially weaker to publish ICW.

CSR has a favorable impact on financial success, according to the Hypothesis 2. To begin, observe that the findings of the regression reported in Table 3 support our Hypothesis 2 that corporate social responsibility has a considerable impact on performance. The

coefficient relating to CSR is positive (0.01) and significant ($p = 0.000$), according to the findings.

These findings support the second idea Hypothesis 2. By overcoming the literature's conflicting and often contradictory outcomes to date (Font & Lynes, 2018). CSR is linked to a firm's good relationship with its stakeholders, according to the literature, and strong relationships are advantageous to financial performance. Previous findings, on the other hand, imply that poor social performance is detrimental to financial performance since it implies costs that a company must bear. To see if there's a link between CSR and performance. To accomplish so, we used a panel regression model with very recent data from 2012 to 2018 to investigate the effect of CSR on the performance of French companies in the SBF 120 index. Our findings corroborate the notion that the relationship between these variables might be either positive or negative, implying that only the best CSR results are advantageous to performance. Interestingly, our findings support prior findings that CSR has a favorable impact on performance (Park & Lee, 2009).

To receive financial benefits, organizations must cross a CSR threshold. This threshold corresponds to the moment at which stakeholders begin to regard CSR policies as credible and effective, and hence reward firms by facilitating access to the resources they require. To put it another way, we show that considering both negative and positive characteristics at the same time allows us to comprehend the complex relationship between CSR and performance. Companies must recoup and exceed expenditures associated with CSR initiatives in order to value them. Low levels of CSR, on the other hand, are unable to cover these expenses since stakeholders tend to blame companies whose sustainable practices fall short of being viewed as robust and genuine. Due to minimal CSR engagement, companies that perform poorly incur reputational consequences.

4.4 | The impact of CSR and internal control on firm value using GMM

To ensure the robustness of our empirical results, we use the GMM method. This method provides solutions to the problems of reverse causality, simultaneity bias and possible omitted variables. In addition, it allows to control of specific temporal and individual effects and reduces endogeneity biases. The realization of this method is done by software (STATA) and above all, we focus on the command (XTABOND2). The system GMM regression results are shown in Table 4 below.

ICW, according to the Hypothesis 3, moderates the relationship between CSR behavior and business financial performance. The regression results in Table 4 demonstrate that the interaction between ICW and CSR appears to have a negative influence on financial success, which is in line with our Hypothesis 3. The coefficient for

TABLE 4 The impact of CSR and internal control on firm value using GMM

	1 TBQ	2 TBQ	3 TBQ	4 TBQ
L.TBQ	0.626***	0.535***	0.536***	0.542***
	−298.04	−155.14	−150.42	−132.32
ICW	0.045***		0.041***	0.085***
	−8.38		−5.81	−5.34
ESG		0.004***	0.003***	0.004***
		−25.36	−18.16	−16.39
ICW*ESG				−0.001***
				(−3.25)
FSIZE	0.123***	0.139***	0.136***	0.135***
	−47.77	−49.66	−40.76	−38.22
LEV	−1.581***	−1.530***	−1.558***	−1.517***
	(−240.07)	(−139.85)	(−106.65)	(−82.98)
Growth	0.001	0.002	−0.009*	0
	−0.17	−0.48	(−1.82)	(−0.03)
AUDTQ	0.428***	0.636***	0.595***	0.625***
	−17.06	−18.69	−15.84	−13.6
Industry fixed effect	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes
_cons	−1.292***	−1.770***	−1.724***	−1.704***
	(−15.36)	(−32.36)	(−36.71)	(−38.49)
N	588	588	588	588

Abbreviations: AUDTQ, Audit quality; ESG, environmental, social, and governance; FSIZE, company size; GROWTH, is calculated based on the change in the total revenue deflated by the total revenue; ICW, internal control weaknesses; LEV, debt level; Ln_AGE, firm age. *, **, *** significant relationship at 10%, 5%, and 1% threshold.

the variable IC*CSR is negative (−0.001) and significant ($p = 0.000$), according to the findings.

These results mean that corporate governance mechanisms focused on sustainable development can be perceived by market players as costly actions, and of a purely symbolic nature, without any real anchoring in the strategic project of the company (Feng et al., 2020; Hassan et al., 2020; Hazaea et al., 2022; Khatib, Abdullah, Elamer, & Abueid, 2021; Khatib, Abdullah, Elamer, Yahaya, & Owusu, 2021). On the other hand, investors use CSR information to estimate returns, while shareholders use CSR information to understand how their funds have been used in expectation of future profitability. A high level of disclosure of CSR information affects the behavior of shareholders with regard to the sale and purchase of securities, which is the source of the variation in stock prices. For their part, Barnea and Rubin (2010) suggest that there is a major conflict of interest relating to the CSR approach between shareholders insofar as high expenditure on CSR does not always aim to maximize the stock market value of the company, but can rather benefit employees, especially when it comes to improving working conditions. Also, overinvestment in CSR can be beneficial for managers because it improves their reputation when listening to societal and environmental issues.

Our findings imply that the relationship between CSR and performance cannot be described by a single strategy, but rather requires consideration of company-specific contingency factors that may influence how organizations engage in socially responsible activities. Among the many elements that can be considered, this article emphasizes the importance of the IC system in evaluating the impact of CSR within enterprises. We give empirical evidence of the positive influence on the performance of the interplay between IC and CSR. This finding supports prior research (Molina-Azorín et al., 2015; Quintana-García et al., 2018), indicating that CSR has a favorable overall influence on performance. As a result, while adopting CSR initiatives, organizations have to thoroughly evaluate the prospect of participating in quality management techniques through ISO 9001 accreditations. Indeed, because CSR is a strategic approach aimed at improving performance through stronger interactions with stakeholders such as employees, consumers, and suppliers, its implementation can lead to confusion between various measures aiming at similar goals. To avoid duplicating procedures that impair company performance, CSR and the quality of the IC system necessitate the adoption of structural and systematic actions, and managers must emphasize their consideration of a restricted set of challenges (Ocasio, 1997).

However, the IC system must constitute an essential vector to improve the ability of the company to achieve its objectives. Then, the assessment of the efficiency of an IC system is a subjective judgment based on the presence of the five components of this system and the effectiveness of its operation. This effectiveness provides a reasonable level of assurance that one or more categories of objectives will be achieved. It is for this reason that the elements of IC constitute criteria of effectiveness. Thus, the cost of not having an effective internal control system, based on its five elements, can even go as far as business failure. On the other hand, the IC system must be designed at a lower cost for the IC system to be efficient. According to the definition of the French chartered accountants order, IC is a general management discipline to ensure better efficiency of the means implemented to ensure the sustainability and performance of the company.

5 | CONCLUSION

To conclude, we can say that numerous stakeholders, such as investors, financial risk managers, insurance companies, and NGOs, are increasing their pressure on French companies to measure, disclose, monitor, and manage their ESG performance. Therefore, this work aims to look into the effect of IC and corporate social responsibility on financial performance. The sample includes 98 French companies that were listed between 2012 and 2018. We employ a variety of techniques, including multiple linear regression and system GMM. The importance and benefits of employing the GMM estimator in a system are demonstrated. Reverse causality, simultaneity bias, and possibly omitted factors are all addressed by GMM. It also enables the manipulation of precise temporal and individual effects.

The following sections outline the findings. We discover that ICW improves financial performance as assessed by Tobin's Q. Despite this, CSR has a statistically significant positive impact on financial performance. Moreover, internal control and CSR interactions have a negative and severe impact on financial performance. After using the GMM approach to test for endogeneity, we found that the results are reliable. Overall, our findings provide empirical evidence that internal control is an organizational necessity and that financial markets assess information system risk. We believe that this is the first study in France to show a link between internal control, CSR, and financial performance. Therefore, our findings confirm the social responsibility concept presented in this study.

For practitioners, our research highlights the implications in terms of IC and contributes to the debate on the implementation of the SOX law. Accordingly, companies should assess internal control to secure their systems, recognizing that a good system of IC is important to realize the value-added potential of investments while mitigating risk. The results of our study have significant implications for policymakers, professionals, and managers. Our study framework aims to guide companies on the impact of CSR and IC on the implementation of performance. The results highlight that CSR has no direct effect on corporate performance, but due to IC, this relationship has changed. Thus, company directors cannot ignore CSR to measure firm performance because several researchers have confirmed that CSR improves organizational performance (Long et al., 2020; Orazalin, 2020). Managers and decision-makers must focus on CSR and IC to measure performance.

As a result, we advise businesses to pay attention to human resource management techniques. Furthermore, through the commitment to technology and standardization of policies and procedures for the approval, verification, and reconciliation of transactions, companies should become more committed to social responsibility, competence, ethical value and integrity, in addition to the development of detection and preventive control activities. However, issues such as

oversight activities, information and communication and risk assessment should be addressed in accordance with the realities of each company's operational structure so that the IC system's role will not be jeopardized by an unbalanced approach to communication and information, risk assessment and activity monitoring. However, like many studies, our study has limitations as the scope of this research is limited. The fact that the data for this study come from a single nation (France) limits the generalization of our findings to some other countries. Nevertheless, the findings in this work are still relevant. As a result, future scholars can investigate the influence of IC and CSR on other countries or regions.

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