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Does CEO profile affect firm financial performance? A study of French firms

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Abstract

***Research Question*:** How do CEO characteristics affect firm financial performance, based on ROA, Tobin's Q, and MTB?
***Motivation*:** In fact, it is important to study the different characteristics of the CEO, which can affect firm financial performance in the French context.
***Idea*:** The present work aimed to examine the impact of chief executive officer (CEO) characteristics on firm financial performance examined by ROA, Tobin's Q and MTB.
Data: Our sample consists of French firms listed on the CAC All Shares index from 2014 to 2023. We excluded financial companies due to their atypical financial reporting practices, as well as firms with incomplete annual reports or insufficient CEO data. Using panel regression analysis, we examined a final sample of 151 firms over a ten-year period.
***Tools*:** Our regressions will be estimated by the feasible generalized least squares (FGLS) method.
***Findings*:** Using firm financial performance as the dependent variable, our model results indicate a positive and significant relationship between CEO tenure, CEO compensation, CEO nationality, and CEO board membership and firm financial performance. However, no significant relationship was found between CEO gender, CEO turnover, and firm financial performance.
***Contribution*:** There is a notable gap in research on the influence of CEO nationality on firm financial performance. This study aims to provide empirical insights into how CEO characteristics affect firm performance and contribute to improved financial outcomes.

Keywords: CEO characteristics, firm financial performance, CEO nationality, CEO gender, CEO expertise.

JEL codes: M41, M42, M48

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1. Introduction

The CEO is the top executive of a company, responsible for key strategic decisions and acting as the main representative of the organization (Desir *et al.*, 2024). As the most influential figure within the firm, the CEO holds substantial authority over financial reporting, board composition, and overall outcomes (Yahaya, 2022). Although many studies examine CEO attributes and their effects on corporate decisions (Kouaib & Jarboui, 2016), findings remain fragmented or inconsistent. This study addresses these limitations by examining the relationship between CEO profiles and financial performance in listed French companies using a comprehensive set of CEO-related variables. This multidimensional approach captures interactions between characteristics, showing that performance cannot be explained by isolated traits alone.

Financial performance remains a central topic in corporate governance (Ghardallou *et al.*, 2020). Among these determinants, CEO characteristics play a key role (Fernández-Temprano & Tejerina-Gaite, 2020). As managerial responsibilities expand, CEOs are increasingly expected to drive growth, manage complexity, and control costs (Ghardallou *et al.*, 2020).

To the authors' knowledge, this research is among the first in France to assess firm performance using three indicators (ROA, MTB, and Tobin's Q). The scarcity of research in the French context offers an opportunity to deepen understanding of how CEO characteristics shape performance. While previous studies often focus on specific traits or regions, such as CEO nationality in Asia (Ahmad *et al.*, 2022; Mohd Idris, 2021), the French context remains understudied. France's institutional environment, shaped by legal constraints, transparency requirements, and a tradition of centralized governance, influences CEO selection. Concentrated ownership structures, often involving families or the state, tend to favour technocratic executives from elite backgrounds. Social dialogue and collective bargaining also require CEOs to possess strong interpersonal and political skills. These features differ from Anglo-Saxon models and justify a contextualized analysis.

CEOs also provides an overview of earlier research on multiple CEO characteristics, showing that their interactions can reinforce or offset one another. Considering these traits jointly offers a more nuanced understanding of executive influence. The study further extends the literature by highlighting CEO nationality, which remains relatively rare in France but is associated with international perspectives and innovation (Caby & Hirigoyen, 2005). Foreign CEOs can bring new approaches to leadership and strengthen firms' competitiveness abroad. The complementarity between nationality and other traits also enriches the analysis.

By examining several executive attributes together, this research provides a more complete view of CEO influence within the French business environment (Hambrick & Mason, 1984). The integrated approach reveals patterns that single-attribute

studies overlook. The analysis covers a ten-year period (2014–2023), enabling the identification of both short-term and long-term effects. Firm performance is measured using ROA, MTB, and Tobin's Q, which together offer operational and market-based perspectives.

The study draws on 1,510 firm-year observations from 151 non-financial French listed firms. CEO characteristics include age, tenure, duality, compensation, gender, turnover, expertise, nationality, and board membership. Results show that CEO nationality positively affects all three performance indicators.

Foreign CEOs' experience and international exposure appear to strengthen competitiveness and support market expansion. Badru and Raji (2016) argue that nationality may improve alignment between executives and shareholders. CEO compensation is also positively associated with performance, suggesting that performance-based pay encourages balanced risk-taking and long-term decision-making.

Therefore, the remainder of this paper is organized as follows. Section 2 provides a literature review and the hypothesis development then, section 3 describes the research methodology after that, section 4 evaluates the regression results and discussion and finally, section 5 includes the conclusion and the policy recommendations.

2. Literature review and hypothesis development

2.1 Related Literature

Upper Echelons Theory (UET) states that a firm reflects its CEO's traits, such as personality, experience, and values, which shape strategic decisions, value creation, and financial reporting (Hambrick & Mason, 1984; Hambrick, 2007). CEO demographics and personal attributes influence managerial behavior, firm success, and accounting outcomes (Hiebl, 2014; Francis *et al.,* 2008), showing that top executives' characteristics directly impact organizational decisions.

Agency Theory (Jensen & Meckling, 1976) views firms as contracts between principals and agents, where managers may act in their own interests due to information asymmetry. This misalignment with shareholders can lead to conflicts in decisions and resource allocation, highlighting the need for mechanisms that align managerial incentives with shareholder goals (Jensen, 1986).

Signaling Theory (Spence, 1973) explains how managers communicate information to investors under asymmetric information. Managers decide what to disclose and how, while investors interpret and assess credibility. The theory highlights the

strategic role of disclosure and the challenges of unequal information (Altamuro et al., 2005).

Stakeholder theory emphasizes that managers have responsibilities toward all parties affected by the firm, not just shareholders (Mercier, 1999; Freeman, 2010). It guides managerial decision-making, promotes collaboration among stakeholders, and incorporates an ethical dimension, supporting a more inclusive, responsible, and sustainable approach to corporate governance (Donaldson & Preston, 1995).

2.2 Literature review and hypothesis development

We develop the hypotheses about the effects of the CEOs' profile on the firm performance.

2.2.1 CEO age

Age is often used as a proxy for experience, making it a significant demographic factor in assessing corporate leadership. Researchers commonly associate age with qualities such as maturity, confidence, and strategic insight (Serfling, 2014). Consequently, older CEOs may be better positioned to make informed decisions, provide a long-term strategic vision, and offer stable leadership that supports improved financial outcomes. The experience accumulated over time can enhance a CEO's confidence and decision-making abilities, improving their capacity to navigate complex organizational challenges and guide the company toward sustainable growth (Naseem *et al.,* 2019). In line with this, Upper Echelons Theory identifies age as a key personal characteristic influencing firm performance (Hambrick & Mason, 1984). Supporting this view, Barker and Mueller (2002) emphasize that a CEO's age is a critical factor when analysing sociological characteristics. Research by Malm *et al.* (2021) further suggests that age affects a CEO's risk preferences, which may shape strategic decision-making and corporate outcomes. However, Cline and Yore (2016) note that older CEOs may experience neurophysiological decline, including reductions in cognitive functions such as perception, numerical ability, and verbal memory. This decline can contribute to increased risk aversion, as also observed by Serfling (2014), with older executives tending to adopt more cautious approaches in their decisions.

Faccio *et al.* (2016) report that firms led by older CEOs generally exhibit lower levels of debt, consistent with behavioural finance theory and the notion that risk aversion increases with age. Conversely, studies by Setiawan and Gestanti (2019) suggest that younger CEOs may drive more favourable performance outcomes. This highlights the potential benefits of youthful leadership in fostering innovation and growth. Supporting this view, Bhabra and Zhang (2016) found that firms led by younger CEOs tended to achieve higher average growth compared to those managed by older

executives. In contrast, Ahmad *et al.* (2022) reported no significant relationship between a CEO's age and firm financial performance, suggesting that age alone may not be a reliable predictor of success. These contrasting findings highlight the complexity of the relationship between CEO age and firm performance. They suggest that age should be considered together with other leadership characteristics when evaluating its impact on corporate outcomes. Based on the discussion above, our first hypothesis is as follows:

H_1: CEO age negatively affects firm financial performance**.**

2.2.2 CEO tenure

Several studies have examined CEO tenure as a critical factor influencing firm performance (Naseem *et al.,* 2020). Among scholars and practitioners, there has long been a debate over whether CEOs remain in their positions for too long (Brochet *et al.,* 2021). CEO tenure is a central characteristic that underscores the role of time in leadership studies. In this context, Hambrick and Fukutomi (1991) argued that a deeper understanding of CEO tenure has "major implications for the validity of Upper Echelons Theory," which connects executive attributes to firm-level outcomes. CEOs with longer tenures typically accumulate critical experience in strategic management, crisis response, and market dynamics. This depth of expertise often enables them to make more informed, contextually relevant decisions. Research supports the idea that CEO tenure is positively correlated with value creation (Bouaziz *et al.,* 2020).

Long-tenured CEOs also tend to benefit from advantages that enhance their influence and leadership capacity. Over time, they build stronger relationships with internal and external stakeholders, deepen their understanding of the organization, and increase their bargaining power. These factors collectively improve their ability to implement strategic initiatives and drive company performance (Suherman *et al.,* 2023). Moreover, their accumulated knowledge can offer reassurance to investors and stakeholders regarding the firm's direction and stability (Emestine & Setyaningrum, 2019).

The longer a CEO remains in office, the more relevant and applicable their skills and experience become in managing the company's evolving challenges (Tho, 2024). Several studies support this positive association. For instance, research by Yusuf and Yahaya (2023) and El Abiad *et al.* (2024) found that CEO tenure contributes positively to firm performance. Liu and Jiang (2020) observed that extended CEO tenure can have a significant negative impact on company performance. This suggests that while experience and stability may be beneficial up to a point, overly long tenures could lead to stagnation, resistance to change, or entrenched leadership dynamics. Such dynamics may hinder innovation and adaptability. Based on the arguments presented above, we propose the following hypotheses:

$H_{2.a}$: CEO tenure positively affects firm financial performance.
$H_{2.b}$[2]: CEO tenure negatively affects firm financial performance.

2.2.3 CEO duality

CEO duality refers to a governance structure in which a single individual serves as both Chief Executive Officer (CEO) and Chairperson of the Board (Rechner & Dalton, 1991). This dual role continues to be a central focus in corporate governance discussions. From an agency theory perspective, CEO duality functions as an internal control mechanism designed to streamline leadership and clarify authority (Yu, 2023). Proponents argue that concentrating leadership in one person can facilitate decision-making and enhance firm performance (Finkelstein & D'Aveni, 1994). It provides clear strategic direction and unified implementation, which may improve operational efficiency. However, many scholars oppose CEO duality. Krause and Semadeni (2013) suggest that separating the roles of CEO and chairperson is more effective in ensuring balanced governance and oversight.

In contrast, stewardship theory offers a different view. It suggests that CEO duality can enhance accountability and unify leadership, potentially benefiting firm performance (Boyd, 1995). Nevertheless, theoretical research has not reached a consensus on whether firms with separated leadership roles perform better than those with combined roles (Chen *et al.,* 2008). A key criticism of CEO duality is its potential to undermine the board's monitoring role, increasing agency costs (Fama & Jensen, 1983). Having two top executives may slow decision-making and reduce the efficiency of execution compared to a single-leader structure. Empirical findings on the effects of CEO duality remain mixed. Qadorah and Fadzil (2018) report a positive relationship between duality and firm performance. Conversely, Mubeen *et al.* (2021) and Tho (2024) suggest negative effects. Meanwhile, Krause *et al.* (2014) founds no significant relationship, highlighting the complexity and context-dependent nature of the issue. Accordingly, we propose the following hypothesis:

H_3: CEO duality negatively affects firm financial performance**.**

2.2.4 CEO turnover

The replacement or succession of a CEO is a pivotal moment for any organization. It has significant implications for internal processes and overall performance (Kim *et al.,* 2021). This decision is not taken lightly, as it carries long-term consequences for the company's strategic direction and financial health (Shleifer & Vishny, 1997).

[2] CEOs with long tenures may struggle to adapt to new market trends and emerging technologies. According to Faccio *et al.* (2016), this disconnect can lead to underperformance compared to companies led by younger CEO's who are more in tune with industry developments.

Among the factors influencing CEO succession, the personal characteristics of the CEO play a critical role. These traits are particularly important in shaping organizational outcomes and financial performance (Al-Shammari, 2021). In addition to demographic and behavioural characteristics, it is important to consider the impact of leadership changes on firm performance. A newly appointed CEO often brings a different leadership style, vision, and set of personal attributes compared to their predecessor. For instance, newly appointed CEOs are more likely to adopt transparent practices. They may also reduce earnings management, especially during their first year in office, as they seek to establish credibility and lay the groundwork for their strategic agenda. Empirical research supports the idea that CEO succession can substantially affect various aspects of company performance.

Despite the global relevance of CEO turnover, research on this topic in the French context is limited. Studies focusing specifically on CEO succession within French firms remain scarce. This highlights a potential gap in the literature. One common reason for CEO turnover is age. Executives who reach or exceed retirement age are more likely to be succeeded by younger leaders. However, the outcomes of such transitions are not universally positive. Waseem *et al.,* (2023) found a negative association between CEO turnover and firm performance. This suggests that leadership change does not always yield the intended benefits. Based on the discussion above, our hypothesis is as follows:

H_4: CEO turnover negatively affects firm financial performance.

2.2.5 CEO compensation

Executive compensation policy is a key factor in a company's success. It also serves as a powerful strategic lever (Fama, 1980). A well-designed compensation plan can motivate CEOs to focus on maximizing long-term firm value. It encourages decisions that align with the interests of shareholders and other stakeholders. By incentivizing the right behaviours, executive pay structures play a crucial role in shaping leadership effectiveness and organizational outcomes. The relationship between executive compensation and firm performance has been widely studied. Numerous researchers have explored this link, with many studies revealing a modest yet significant correlation between CEO compensation and firm performance (Lindström & Svensson, 2016). While the strength of this relationship may vary, the evidence suggests that compensation remains an important mechanism for influencing executive behaviour and company results.

According to Carter *et al.* (2003), agency theory proposes that CEO compensation packages can be designed to mitigate conflicts of interest between managers and shareholders. These packages align the incentives of executives with those of the company's owners. Building on this theory, researchers such as Ozkan (2011) have highlighted the motivational role of executive compensation. They emphasize its

impact on managerial performance. Leonard (1990) also contributed to this body of research by documenting the effects of compensation on firm outcomes. Gregg *et al.* (2005) found a relationship between cash compensation and firm performance, adding further empirical support to the theory. Loomis (1982) argued that there is no consistent connection between executive compensation and measures such as profitability or stock price performance. Despite the mixed findings, many scholars continue to support the idea that compensation structure can enhance managerial accountability and firm value. This is particularly true when the structure aligns with agency theory principles. Datar *et al.* (2001), assert that the design of CEO compensation contracts remains essential for aligning executive incentives with the interests of firm owners.

Based on the discussion above, the paper proposes the following hypothesis:

H_5: Total CEO compensation positively affects firm financial performance.

2.2.6 CEO gender

In the aftermath of the 2008 financial scandals, gender diversity in key corporate positions has received significant attention over the past decade (Zouari *et al.*, 2012). Gender differences, reflected in roles, attributes, attitudes, and behaviors, may lead to distinct approaches to business management (Chitnomrath, 2020). The gender of a CEO is a key demographic characteristic when studying how CEO traits affect firm performance (Naseem *et al.*, 2019). Understanding this factor helps explain how diverse leadership styles contribute to corporate success. According to social role theory and research by Krishnan and Park (2005), firms led by male CEOs differ from those led by female CEOs. Social role theory suggests that female leaders are often more communicative, caring, nurturing, and ethical than their male counterparts. Studies also indicate that female CEOs tend to be cautious and risk-averse in their decision-making (García & Herrero, 2021). Women often exhibit higher ethical standards than men (Barua *et al.*, 2010), which may influence their avoidance of risky investments and financing opportunities (Faccio *et al.*, 2016).

Organizational theory supports the idea that women in leadership can improve organizational performance and reduce leverage. Gul *et al.* (2011) even argue that women may make more rational decisions than men in corporate settings. However, empirical findings on the effect of CEO gender on firm performance are mixed. Naseem *et al.*, (2020) and Hazzaa *et al.*, (2024) find that female CEOs positively influence financial performance. On the other hand, Chen & Hassan (2022) suggest that female executives is negatively associated with firm performance. In contrast, Barua *et al.* (2010) suggest that male managers are equally capable. Rahman and Chen (2023) and El Abiad *et al.* (2024) report no significant relationship between CEO gender and firm performance. Thus, we hypothesize the following:

H_6: The presence of female CEOs positively affects firm financial performance.

2.2.7 CEO nationality

Nationality is often considered a key indicator of intercultural competence (Sebbas, 2017). This has led boards of directors to increasingly appoint foreign executives to lead their companies. According to Zalewska (2014), foreign top executives bring several advantages. They promote the exchange of global knowledge, introduce innovative practices, and provide valuable business expertise. These contributions often result in better business outcomes due to the increased economic flexibility that foreign executives offer. Le and Kroll (2017) argue that foreign CEOs have deep knowledge of international markets and regulations. This knowledge is particularly valuable regarding customers, competitors, and foreign employees. Furthermore, foreign CEOs proficient in the host country's language can facilitate smoother negotiations and contract finalization (Patzelt, 2010). Their existing social networks in previous host countries can also help secure foreign business partnerships (Herrmann & Datta, 2005). Empirical studies show a positive correlation between foreign CEOs and firm performance (Badru & Raji, 2016). These findings support resource dependence theory and human capital theory. In this context, Badru and Raji (2016), Ahmad *et al.* (2022), and Yusuf and Yahaya (2023) suggest that CEO nationality can better align managers' and shareholders' interests. This alignment can enhance a firm's competitive advantage.

However, the literature also presents different perspectives. Elsharkawy *et al.* (2018) argue that foreign CEOs may lack the experience needed to navigate a closed domestic market. This can limit their influence on decision-making. Masulis *et al.* (2012) emphasize that foreign executives may be unfamiliar with local regulations and management practices, which could negatively affect company performance. Kaur and Singh, (2018) suggests a negative relationship between CEO nationality and firm performance. In contrast, Vintilă *et al.* (2015) found no significant relationship between CEO nationality and firm value, as measured by Tobin's Q. Accordingly, we propose the following hypothesis:

H_7: The foreign CEO positively affects firm financial performance.

2.2.8 CEO expertise

The financial experience of a CEO is a critical issue within organizations. It is linked to various factors, including firm performance (Saleh *et al.*, 2020). CEOs with years of experience are better equipped to lead effectively. They can also make decisions with greater discretion and accuracy (Chitnomrath, 2020). It can significantly influence decision-making and strategic direction (Gounopoulos & Pham, 2018). Together, these insights highlight the importance of a CEO's background in shaping organizational outcomes. Robinson & Sexton (1994) emphasized that experience is

a key attribute of a good manager. Such a manager also possesses a strong entrepreneurial drive. Fredrickson (1985) argued that the decision-making processes of experienced CEOs differ markedly from those of inexperienced ones. Supporting this, Saidu (2019) found that stock performance improves when the CEO has prior experience with the firm. This suggests that less experienced CEOs may be more "naïve." They may also lack the well-developed knowledge base necessary to make sound decisions. Additionally, CEOs with financial experience tend to be less likely to manipulate earnings compared to those without such experience.

Li and Singal (2017), report a negative relationship between CEO experience and firm performance. On the other hand, Upper Echelons Theory supports the idea that prior CEO experience positively influences firm performance (Wang *et al.,* 2016). This leads us to hypothesize the following:

H_8: The CEO expertise positively affects firm financial performance.

2.2.9 CEO board membership

As a member of the board of directors, the CEO plays a crucial role in formulating and executing the company's strategies. This role directly impacts the company's financial performance. Studies show that the CEO's presence on the board improves coordination between management and the board. Furthermore, the CEO's participation reinforces accountability and transparency. These effects can enhance investor and stakeholder perceptions and positively influence financial performance (Fama, 1980). CEO board membership refers to a situation in which an individual serves both as a director and as the company's CEO (Bouaziz *et al.,* 2020). A CEO who holds a seat on the board typically exercises greater influence over both the board and the organization. This influence arises from their authority over operational matters and their established relationships with other board members (Yang *et al.,* 2018). Conversely, when the CEO is not a board member, interactions with the board are limited. This limitation reduces opportunities to build social ties that could lead to personal benefits. As a result, the board's monitoring function can be weakened. However, this dual role can offer strategic business advantages. It improves information acquisition and dissemination and accelerates decision-making processes (Yang & Zhao, 2014).

Serving simultaneously as CEO and board member also provides greater assurance. This assurance ensures that oversight from the board or management does not impede innovative projects (Daily & Dalton, 1993).

Accordingly, we propose the following hypothesis:

H_9: CEO board membership positively affects firm financial performance.

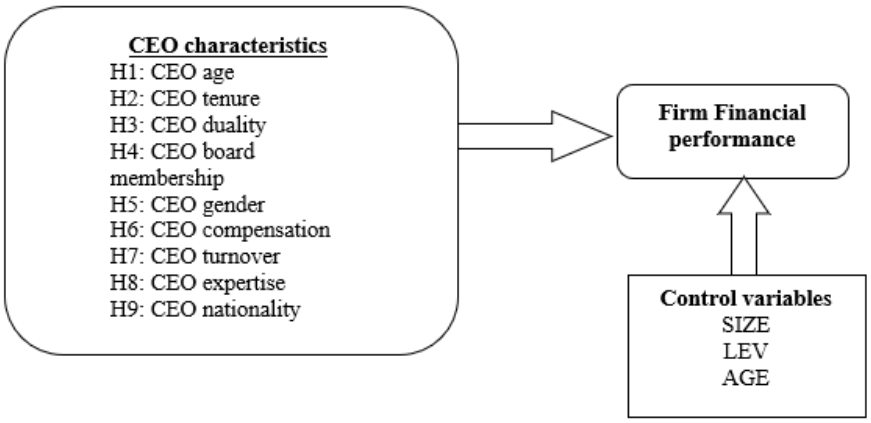

Figure 1. The impact of CEO profile on firm financial performance

3. Research Methodology

This section focuses on describing the study's sample, the methodologies used, the data collection procedures, the measurement of variables, the empirical model, and the research design.

3.1 Data collection and sample selection

Our sample consists of French firms listed on the CAC All Share index from 2014 to 2023. The initial sample included 335 listed French companies. We excluded 49 financial institutions due to their atypical financial reporting practices, 85 companies with incomplete annual reports, and 50 companies with insufficient data on their CEOs. Financial firms were excluded because their distinct regulatory environments and specialized reporting standards could introduce inconsistencies into the analysis. Specifically, financial companies (such as banks and insurance firms) are subject to regulations that significantly influence their managerial decisions and risk management practices. Moreover, these firms often have complex organizational structures and governance systems that differ markedly from those in other industries. Their exclusion is therefore justified to ensure data homogeneity and comparability across firms with similar structures. This study focuses on the French context, which is characterized by relatively weak legal institutions, a high prevalence of family-owned businesses, and a tendency for CEOs to be members of the controlling family. In this context, many large publicly traded companies are often controlled by families or groups of concentrated shareholders, which can influence both the selection of CEOs and their decision-making processes. The final sample comprises 151 companies over a 10-year period, resulting in 1,510 firm-year observations. Data on CEO characteristics were manually collected from annual reports available on the www.boursier.com/indices and Zone Bourse websites. Financial data were retrieved from Datastream.

Table 1. Sample selection procedure

Description	Number of companies
Initial sample listed on CAC ALL Shares index	335
Financial firms	(49)
Firms with insufficient annual report	(85)
Firms with insufficient data	(50)
Final sample	151
Duration study	10
Total observations	1510

The sample includes companies from various sectors. The table below provides an overview of the number of companies by sector.

Table 2. Distribution of the sample according to sectors' type

Sector	Observation
Industrial sector	
Construction material	7
Various industries	54
Total industrial firms	61
Commercial sector	
Total commercial firms	23
Service sector	
Computer service and consulting	17
Construction and Mining	5
Transport, communication, gas	10
Various service	35
Total service firms	67
Total firms	151

3.1 Variable measurement

3.1.1 Measuring the dependent variable

The company's performance, which serves as the dependent variable, is assessed using three key indicators: return on assets (ROA), market-to-book ratio (MTB), and Tobin's Q. ROA measures how effectively a company utilizes its assets to generate profits (Al-Musali & Ismail, 2014). This indicator is particularly useful for evaluating a firm's profitability independently of its capital structure, thus enabling comparisons across companies and industries. ROA is calculated as the ratio of net income for the year to total assets at the end of the year.

The price-to-book ratio is a widely recognized and well-established indicator of value. The market-to-book ratio predicts returns primarily because it incorporates retained earnings relative to the market, which include past profits (Ball *et al.*, 2020).

The Market-to-Book (MTB) ratio is calculated as the ratio of the book value of equity to the market value of equity.

The current study uses Tobin's Q to measure a company's market performance, as this indicator effectively reflects market expectations regarding the company's future earnings (Kramaric *et al.*, 2016). Tobin's Q has the advantage of incorporating both financial and market data, offering a more comprehensive measure of corporate performance (Ouni *et al.*, 2020). Tobin's Q is calculated as the ratio of the market value of the firm's assets, including market value of shares and debt, to the replacement cost of its assets.

3.1.2 Measuring the independent variables: CEO characteristics

We classify these characteristics into two groups: dummy variables and continuous variables. Accordingly, the following measures are applied in our study:

- CEO Age (AGE): Measured as the logarithm of the CEO's age.
- CEO Tenure (TEN): Measured as the number of years the CEO has served in the position.
- CEO Duality (DUAL): Measured as a dummy variable, taking 1 if the CEO holds both CEO and chairman positions (duality) and 0 otherwise.
- CEO Board Membership (MEMB): Measured as a dummy variable, taking 1 if the CEO is a member of the board of directors and 0 otherwise.
- CEO Gender (GEN): Measured as a dummy variable, taking 1 if the CEO is female and 0 otherwise.
- CEO Compensation (COMP): Measured by the total compensation received by the CEO.
- CEO Turnover (TURN): Measured as a dummy variable, taking 1 if there is a change in the CEO's identity during the fiscal year and 0 otherwise.
- CEO Expertise (EXPER): Measured as a dummy variable, taking 1 if the CEO holds (or has held) one of the top senior positions within other firms (CEO-chairman, CEO, COO, CFO, or President) and 0 otherwise.
- CEO Nationality (NATI): Measured as a dummy variable, taking 1 for the foreign nationality in question and 0 otherwise.

3.1.3 Measuring the control variables: Company characteristics

We add a set of Company characteristics as control variables which may affect the firm financial performance. Firm Size (SIZE): Measured as the logarithm of total assets.

- Leverage (LEV): Measured as the ratio of total liabilities to total assets.
- Firm Age (AGE): Measured as the number of years since the company's creation.

3.2 Model design

We conducted a panel regression analysis on a sample of 151 firms listed on the French CAC ALL index over a ten-year period (2014-2023). Our model, which tests the formulated research hypotheses, is as follows:

$$\mathbf{ROA_{i,t} = \beta_0 + \beta_1 (AGD_{it}) + \beta_2 (TEN_{it}) + \beta_3 (DUAL_{it}) + \beta_4 (MEMB_{it}) + \beta_5 (GEND_{it}) + B_6 (COMP_{it}) + B_7 (TURN_{it}) + \beta_8 (EXPER_{it}) + \beta_9 (NATI_{it}) + \beta_{10} (SIZE_{it}) + \beta_{11} (LEVER_{it}) + \beta_{12} (AGE_{it}) + \varepsilon_{it}. \text{ (Model 1).}}$$

With: $ROA_{i,t}$: Firm Financial Performance the current year t ; AGD_{it} : CEO age ; TEN_{it} : CEO tenure; $DUAL_{it}$: CEO duality ; $MEMB_{it}$: CEO board membership; $GEND_{it}$: CEO gender ; $COMP_{it}$: CEO compensation; $TURN_{it}$: CEO turnover ; $EXPER_{it}$: CEO expertise ; $NATI_{it}$: CEO nationality (NATI); $SIZE_{it}$: firm size (SIZE), $LEVER_{it}$: firm leverage (LEV); AGE_{it} : firm age (AGE). These variables are defined in Table 3.

$$\mathbf{MTB_{i,t} = \beta_0 + \beta_1 (AGD_{it}) + \beta_2 (TEN_{it}) + \beta_3 (DUAL_{it}) + \beta_4 (MEMB_{it}) + \beta_5 (GEND_{it}) + B_6 (COMP_{it}) + B_7 (TURN_{it}) + \beta_8 (EXPER_{it}) + \beta_9 (NATI_{it}) + \beta_{10} (SIZE_{it}) + \beta_{11} (LEVER_{it}) + \beta_{12} (AGE_{it}) + \varepsilon_{it}. \text{ (Model 2).}}$$

With: $MTB_{i,t}$: Market to Book Value the current year t.

$$\mathbf{\text{Tobin's } Q_{i,t} = \beta_0 + \beta_1 (AGD_{it}) + \beta_2 (TEN_{it}) + \beta_3 (DUAL_{it}) + \beta_4 (MEMB_{it}) + \beta_5 (GEND_{it}) + B_6 (COMP_{it}) + B_7 (TURN_{it}) + \beta_8 (EXPER_{it}) + \beta_9 (NATI_{it}) + \beta_{10} (SIZE_{it}) + \beta_{11} (LEVER_{it}) + \beta_{12} (AGE_{it}) + \varepsilon_{it}. \text{ (Model 3).}}$$

With: Tobin's $Q_{i,t}$ is considered as a financial market-based measure of firm performance.

Table 3. Summary of variables definitions

Variable	Definition	Measure	Authors
Dependent variable			
ROA	Firm financial performance	Ratio of net income to total assets in year t.	Wijaya *et al.* (2023); El Abiad *et al.* (2024); Sultana, *et al.* (2025).
MTB	Market to Book	The ratio of book value of equity to market value of equity	Chu *et al.* (2023); Desir *et al.* (2024).
Tobin'Q	Market performance	(Market values shares + Debt)/Total asset	Ahmad *et al.* (2022); Tambunan (2023).

Variable	Definition	Measure	Authors
Independent variables			
AGD	CEO AGE	The logarithm of the CEO's age.	Belot and Serve (2018); Desir *et al.* (2024).
ACD	CEO tenure	The number of years since the appointment of the officer in the management position of the current company.	Ahmad *et al.* (2022); El abiad *et al.* (2024).
DUAL	CEO duality	Dummy variable equal to 1 if the CEO is also the chairperson of the board and 0 otherwise.	Wang *et al.* (2019); Shen *et al.* (2022); El Abiad *et al.* (2024);
MEMB	CEO board membership	Dummy variable equal to 1 if CEO sits on the board of directors and 0 otherwise.	Li and Roberts (2017); Bouaziz *et al.* (2020); Chung and Hwang (2025).
GEN	CEO gender	Dummy variable that equals 1 if the CEO is a woman, and 0 otherwise.	Setiawan and Gestanti (2022); El Abiad *et al.* (2024).
COMP	CEO compensation	The logarithm of total executive compensation.	Bouaziz *et al.* (2020).
TURN	CEO turnover	Dummy variable which equal to 1 if the identity of the general manager changes and 0 otherwise.	Paquerot (1996); Cooper (2017).
EXPER	CEO expertise	Dummy variable equal to 1 if the CEO holds one of the top senior positions within other firms (CEO-chairman, CEO, COO, CFO, and President), and 0 otherwise.	Zouari (2012)
NATI	CEO nationality	Dummy variable equal to 1 if the CEO is from foreign nations, and 0 otherwise.	Ahmad *et al.* (2022); Abdullahi *et al.* (2023).
Control variables			
SIZE	Firm size	Log of firm's total assets.	Ilaboya and Aronmwan (2021); Alabdullah and Mohamed (2023); El Abiad *et al.* (2024).
LEV	Firm leverage	Ratio of total liabilities to total assets.	Triki Damak (2018); Lestari *et al.* (2024).
AGE	Firm age	The number of years of existence of the company since its creation.	Muttakin *et al.* (2017); Kalbuana *et al.* (2022).

4. Regression results

The analysis will begin with descriptive statistics, followed by a correlation analysis. Next, the results of the regression analysis will be presented and discussed to assess the validity of the hypotheses.

4.1 Descriptive Statistics

Table 4 presents the summary statistics for the test variables used in our regression analysis. Panel A of Table 4 provides descriptive statistics for the continuous variables in the firm's financial performance model, including the mean, median, standard deviation, maximum, and minimum values. Panel B of Table 4 presents the descriptive statistics for the dichotomous and continuous variables for the firms in our sample. Panel A of Table 4 provides the descriptive statistics for the continuous variables. The minimum firm financial performance is -24.95, and the maximum is 46.65, with a mean of 3.472. The median value is 4.257, and the standard deviation is 9.677. The results in Panel A indicate that the average values for CEO characteristics, such as age, tenure, and compensation, are 3.981, 8.737, and 13.210, respectively, for non-financial companies listed on the French Stock Exchange. Regarding the control variables, the average firm size is 13.933, with a minimum of 8.188, a maximum of 19.436, and a standard deviation of 2.237. The firms' financial leverage averages 27% of total assets, indicating that, on average, firms rely slightly more on equity than on debt. The average age of the sampled firms is 51.04 years, with a minimum of 1 year and a maximum of 187 years.

Table 4. Descriptive statistics

Table 4- Panel A: Summary statistics for continuous variables

Variable	N	Mean	SD	Min	Max	Median
Dependent Variable						
ROA	1510	3.472	9.677	-24.95	46.65	4.257
MTB	1510	1.762	1.593	-9.24	28.12	1.46
Tobin’s Q	1510	1.028	0.949	0.077	16.332	0.779
Independent Variable						
AGD	1510	3.981	0.165	3.135	4.406	4.007
ACD	1510	8.737	8.889	0	46	6
COMP	1507	13.210	1.078	8.517	16.475	13.126
Control variable						
SIZE	1510	13.933	2.237	8.188	19.436	13.698
LEV	1510	0.267	0.646	0	21,750	0.215
AGE	1510	51.299	45.150	1	187	33

Where: ROA is return on assets, MTB is Market to Book ratio, Tobin’s Q is financial market, AGD is CEO age; ACD is CEO tenure, COMP is CEO compensation, SIZE is firm size, LEV is firm leverage, AGE is firm size.

The descriptive statistics for the dichotomous variables in Panel B of Table 4 reveal that 52.87% of the sampled French companies have a CEO who also serves as chairman, while 47.22% have separated these roles. Only 8.01% of the companies experienced a CEO change between 2014 and 2023. Additionally, the mean value of gender diversity is 3.11%, indicating that the vast majority of firms have male CEOs. Regarding nationality, 69.27% of the CEOs are French, while 30.73% are of other nationalities. Furthermore, 38.81% of the CEO-chairmen in the sample were either managers of other firms or held significant decision-making roles in other companies, while 61.19% had no such activities in other firms. Finally, 82.45% of the CEOs are board members, whereas 17.55% are not members of the board of directors.

Table 4- Panel B: Summary statistics for dichotomous variables

Variables	Modality	Frequencies	Percentage
DUAL	0	713	47.22%
	1	797	52.78%
TURN	0	1389	91,929
	1	121	8,01%
GEN	0	1463	96,89%
	1	47	3,11%
NATI	0	464	30,73%
	1	1046	69,27%
EXPER	0	924	61,19%
	1	586	38,81%
MEMB	0	265	17,55%
	1	1245	82,45%

Where: DUAL is CEO duality, TURN is CEO turnover, GEN is CEO gender, NATI is CEO nationality, EXPER is CEO expertise, MEMB is CEO board membership.

4.2 Correlation analysis

The correlation matrices in Table 5 display the correlation coefficients among the independent variables. Pearson correlation is used to assess the association between two continuous variables, point-biserial correlation for relationships between a continuous variable and a binary variable, and Phi correlation for associations between two binary variables (Welkowitz *et al.*, 1991). All correlation coefficients fall between -0.7 and 0.7, indicating a low risk of multicollinearity. According to Tabachnick and Fidell (2001), a Pearson correlation coefficient of 0.80 or higher may indicate multicollinearity concerns.

Table 5. Correlation matrix

	ROA	MTB	Tobin's Q	AGD	ACD	DUAL	TURN	COMP	GEN	NATI	EXPER	MEMB	SIZE	LEV	AGE
ROA	1.0000														
MTB	0.2736 (0.0000)	1.0000													
Tobin's Q	0.2159 (0.0000)	0.2434 (0.0000)	1.0000												
AGD	-0.0418 (0.1576)	0.0238 (0.4214)	-0.0730 (0.0136)	1,0000											
ACD	-0.0572 (0.0530)	-0.0743 (0.0120)	-0.1025 (0.0005)	0,2314 (0,0000)	1,0000										
DUAL	-0.1653 (0.0000)	-0.0422 (0.1533)	-0.0900 (0.0023)	0,2051 (0,0000)	0,2795 (0,0000)	1,0000									
TURN	-0.0231 (0.4356)	-0.0631 (0.0328)	-0.0172 (0.5615)	-0,0817 (0,0057)	-0,3638 (0,0000)	-0,1001 (0,0007)	1,0000								
COMP	0.1637 (0.0000)	0.1716 (0.0000)	0.1529 (0.0000)	0,2137 (0,0000)	-0,0682 (0,0210)	0,0561 (0,0580)	-0,0875 (0,0031)	1,0000							
GEN	0.1059 (0.0003)	0.0550 (0.0627)	0.1109 (0.0002)	-0,0187 (0,5277)	-0,0510 (0,0847)	-0,0266 (0,3695)	0,0874 (0,0031)	0,0387 (0,1910)	1,0000						
NATI	0.1245 (0.0000)	0.1684 (0.0000)	0.1198 (0.0000)	0,0330 (0,2644)	-0,0409 (0,1670)	-0,0902 (0,0023)	-0,0256 (0,3868)	0,0016 (0,9577)	0,0311 (0,2934)	1,0000					
EXPER	-0.1648 (0.0000)	-0.1653 (0.0000)	-0.1408 (0.0000)	-0,0682 (0,0211)	0,0574 (0,0522)	0,1174 (0,0001)	-0,0089 (0,7637)	-0,0678 (0,0217)	-0,0446 (0,1317)	-0,2035 (0,0000)	1,0000				
MEMB	-0.0711 (0.0162)	-0.0721 (0.0147)	-0.0104 (0.7250)	-0,0588 (0,0469)	-0,0661 (0,0253)	-0,0443 (0,1338)	0,0049 (0,8686)	-0,1733 (0,0000)	0,0445 (0,1322)	-0,1773 (0,0000)	0,0534 (0,0712)	1,0000			
SIZE	0.0564 (0.0565)	0.1309 (0.0000)	0.0255 (0.3896)	0,2703 (0,0000)	-0,1816 (0,0000)	0,0185 (0,5321)	0,0257 (0,3846)	0,5202 (0,0000)	0,0133 (0,6541)	0,0376 (0,2041)	-0,1201 (0,0000)	-0,0972 (0,0010)	1,0000		
LEV	-0.1994 (0.0000)	-0.1841 (0.0000)	-0.0300 (0.3100)	0,0564 (0,0565)	-0,1148 (0,0001)	-0,0490 (0,978)	0,0546 (0,0647)	-0,0316 (0,2854)	-0,0275 (0,3530)	0,0638 (0,0309)	0,0760 (0,0101)	0,0686 (0,0203)	0,2336 (0,0000)	1,0000	
AGE	0.1912 (0.0000)	0.0165 (0.5777)	0.1255 (0.0000)	0,2105 (0,0000)	-0,1096 (0,0002)	-0,0890 (0,0026)	0,0645 (0,0291)	0,3025 (0,0000)	0,0826 (0,0052)	-0,0209 (0,4797)	-0,0725 (0,0142)	-0,0917 (0,0019)	0,4009 (0,0000)	0,1944 (0,0000)	1,0000

As shown in Table 5, the highest correlation is observed between CEO compensation and firm size, with a coefficient of 0.5202. This confirms that multicollinearity is not a concern in this research model, as none of the correlations exceed the critical threshold.

Table 6. Variance inflation for variables

Variable	VIF	1/VIF
AGD	1.27	0.785
ACD	1.41	0.710
DUAL	1.17	0.856
TURN	1.12	0.889
COMP	2.03	0.492
GEN	1.03	0.972
NATI	1.12	0.895
EXPER	1.09	0.915
MEMB	1.15	0.868
SIZE	2.84	0.352
LEV	1.04	0.965
AGE	1.26	0.791

Note(s): VIF: Variance inflation factor.

Table 6 shows that the variance inflation factors (VIFs) for all independent variables are well below the critical threshold of 10, as suggested by Greene (2008). The highest VIF recorded is 2.84, which is significantly lower than the level at which multicollinearity becomes problematic. Therefore, multicollinearity is unlikely to affect the reliability of this analysis.

4.3 Regression-Analyses Results

Serial correlation in linear panel data models can distort standard errors and reduce the efficiency of estimations (Wooldridge, 2002). To test for the presence of autocorrelation, the Wooldridge test was applied. The results reveal the existence of both heteroscedasticity and serial correlation across all cases. Consequently, the Feasible Generalized Least Squares (FGLS) estimator is deemed appropriate, as it accounts for heteroscedastic errors, cross-sectional dependence, and autocorrelation. Table 7 presents the regression results on firm financial performance using the selected explanatory variables.

Table 7. Multivariate regressions of CEO profile and other control variables

Variables	Predicted sign	Model (1) ROA		Model (2) MTB		Model (3) Tobin's Q	
		Coef.	P-Value	Coef.	P-Value	Coef.	P-Value
AGD	-	-1.416	0.083*	0.026	0.877	-0.191	0.025**
ACD	+/-	-0.004	0.714	-0.017	0.000***	-0.004	0.001***
DUAL	-	-1.174	0.000***	-0.003	0.943	-0.045	0.049**

Variables	Predicted sign	Model (1) ROA		Model (2) MTB		Model (3) Tobin's Q	
		Coef.	P-Value	Coef.	P-Value	Coef.	P-Value
TURN	-	-0.360	0.324	-0.129	0.155	0.011	0.801
COMP	+	1.026	0.000***	0.092	0.006***	0.151	0.000***
GEN	+	0.966	0.183	-0.101	0.363	0.294	0.000***
NATI	+	0.788	0.002***	0.433	0.000***	0.094	0.000***
EXPER	+	-1.151	0.000***	-0.214	0.000***	-0.176	0.000***
MEMB	+	0.514	0.093**	-0.066	0.081*	-0.005	0.874
SIZE	+	-0.290	0.002***	-0.004	0.837	-0.097	0.000***
LEV	-	-2.249	0.001***	-1.009	0.000***	0.397	0.000***
AGE	+	0.018	0.000***	0.000	0.115	0.001	0.000***
R-square			0.1198		0.1270		0.1901
Prob>F			0.0000		0.0000		0.0000
Wald Chi2			252.89		319.10		345.41
Prob> chi2			0.0000		0.0000		0.0000

Statistical significance: ***, **, and * de note significance at the 1%, 5%, and 10% levels, respectively. The dependent variable is represented by ROA, MTB and Tobin's Q.

In testing H1, Table 7 shows that the relationship between CEO age and firm financial performance, as measured by ROA and Tobin's Q, is significantly negative at the 1% and 5% levels, respectively. These results confirm that CEO age has a negative effect on firm performance, in line with Setiawan and Gestanti (2019), who show that younger CEOs tend to achieve better outcomes. This underscores the potential advantages of youthful leadership in promoting innovation and growth. Our findings indicate that older executives may be less open to new ideas and technologies, which can hinder innovation and the firm's ability to adapt quickly to market changes. These results can be interpreted in light of Upper Echelons Theory (Hambrick & Mason, 1984), which posits that organizational outcomes are partially predicted by managerial characteristics, including age, experience, and cognitive biases. Consistently, our results align with Cline and Yore (2016), who argue that advanced age may be linked to neurophysiological decline and more frequent health issues, potentially leading to absences or reduced work capacity over time. However, the relationship between CEO age and financial performance measured by the market-to-book (MTB) ratio is not statistically significant, aligning with the findings of Ahmad *et al.* (2022).

In accordance with Hypothesis H2, the regression analysis results reveal an insignificant coefficient between CEO tenure and firm financial performance when measured by ROA. This result is not in line with Yusuf and Yahaya (2023) and El Abiad *et al.* (2024) who found a positive relationship with CEO tenure and firm performance. This suggests that tenure alone does not necessarily translate into greater competence, as a CEO may accumulate years of experience without effectively adapting or innovating. Conversely, CEO tenure is found to have a significant negative effect on firm performance as measured by MTB and Tobin's

Q, at the 1% significance level. The contradiction between our findings and prior research can be explained by factors such as strategic inertia and resistance to change. It may also result from a lack of governance renewal, thereby limiting the company's innovation and adaptability. However, it is consistent with Liu and Jiang (2020), who identify a negative association. While tenure may enhance risk management capabilities, long-serving CEOs may become overly cautious and resistant to change, thereby limiting the firm's growth prospects.

In support of Hypothesis H3, the results indicate that CEO duality is negatively associated with firm financial performance, as measured by ROA and Tobin's Q, with significance at the 1% level. This suggests that CEOs who simultaneously hold the roles of CEO and board chair tend to reduce firm performance. Our result corrobore with Mubeen *et al.* (2021) and Tho (2024) who suggest a negative relationship between CEO duality and firm performance. This effect likely arises because combining the CEO and board chair roles weakens oversight and increases agency conflicts. These findings can be interpreted through the lens of Agency Theory (Jensen & Meckling, 1976), which posits that the concentration of decision-making authority in a single individual may increase agency problems, reduce effective oversight, and weaken governance mechanisms. However, they contradict those of Qadorah and Fadzil (2018) who report a positive relationship between CEO duality and firm performance. The contradiction in the results can be explained by contextual differences. While some studies highlight the benefits of dual roles for strategic coherence, our study emphasizes the risks associated with power concentration. These risks become particularly significant in the absence of effective control mechanisms. However, no significant relationship is found between CEO duality and firm performance when measured by the market-to-book ratio (MTB).

Table 7 shows that the relationship between CEO turnover and firm performance, measured by ROA, MTB, and Tobin's Q, is not statistically significant. This suggests that changes in top leadership do not systematically influence financial outcomes. This result is not in line with Waseem *et al.* (2023) who found a negative association between CEO turnover and firm performance. These findings can be interpreted through the lens of Upper Echelons Theory (Hambrick & Mason, 1984), which suggests that changes in top management can affect organizational outcomes depending on the characteristics, experience, and adaptability of the incoming CEO. The contradiction between our result and previous studies may be due to well-prepared successions, where the change in leadership did not cause major disruptions. Furthermore, the negative effects of rotation may only manifest in the long term, which could explain the lack of observable relationship in our study in the short term. Newly appointed CEOs may need time to adapt, so their leadership effects might not immediately appear in the firm's financial performance.

Testing H5, Table 7 provides evidence of a positive and significant relationship between CEO compensation and firm financial performance, as measured by ROA,

MTB, and Tobin's Q, at the 1 percent level. This suggests that higher CEO pay is associated with better firm performance, which may reflect the effectiveness of performance-based compensation structures. These findings can be interpreted using Agency Theory (Jensen & Meckling, 1976), which suggests that well-designed compensation packages align the interests of executives with those of shareholders, reducing agency problems and incentivizing performance-oriented behaviour. This result is consistent with Al-Shammari (2021), who confirms a positive correlation between executive compensation and financial performance. It suggests that well-structured compensation packages can enhance accountability and incentivize executives to prioritize the creation of sustainable value. Consequently, such compensation schemes may reduce opportunistic behaviour and promote a stronger commitment to long-term strategic management.

The relationship between CEO gender and firm financial performance, as measured by ROA and MTB, is not statistically significant. Our result corroborates with Rahman and Chen (2023) and El Abiad *et al.* (2024) who report a non-significant relationship between CEO gender and firm performance. This indicates that whether a CEO is male or female does not systematically affect the firm's profitability. This may suggest that, in contemporary corporate settings, organizational outcomes are more influenced by managerial competencies, strategic decisions, and governance practices than by the gender of the CEO. These findings can be interpreted through Upper Echelons Theory (Hambrick & Mason, 1984), which posits that organizational outcomes are influenced by managerial characteristics, including gender, experience, and cognitive styles. This lack of significance may be attributed to the fact that profitability is primarily driven by a CEO's skills, experience, and managerial capabilities, rather than their gender. CEOs of different genders can thus achieve comparable financial outcomes if they possess similar leadership competencies. However, the results also show that CEO gender has a positive and significant effect on firm financial performance when measured by Tobin's Q, at the 1 percent level. Notably, female CEOs are often more adept at detecting earnings manipulation and may be more prudent in decision-making to mitigate litigation risks (Zouari *et al.*, 2012).

Table 7 reveals a positive and significant relationship between a CEO's foreign nationality and firm financial performance, as measured by ROA, MTB, and Tobin's Q, all at the 1 percent significance level. This suggests that firms led by CEOs of foreign nationality tend to achieve higher profitability and market valuation. Foreign CEOs often bring diverse perspectives, international experience, and broader strategic networks, which can enhance decision-making, innovation, and global competitiveness. Our result does not corroborate with Kaur and Singh, (2018); Elsharkawy *et al.* (2018) who suggest a negative relationship between CEO nationality and firm performance. These findings can be interpreted through Upper Echelons Theory (Hambrick & Mason, 1984) which suggests that a CEO's unique

skills, experiences, and international networks constitute strategic resources that can enhance firm performance. This finding is consistent with the studies of Badru and Raji (2016), Ahmad *et al.* (2022), and Yusuf and Yahaya (2023), who underscore the beneficial impact of foreign CEOs on company performance. Foreign CEOs bring a strong understanding of international market dynamics, which is particularly valuable for globally oriented firms (Sebbas, 2017). Their expertise allows them to identify new market opportunities and avoid strategic errors. Furthermore, foreign CEOs tend to introduce diverse perspectives and novel approaches, which can foster organizational creativity and support the firm's international expansion and long-term growth.

The results presented in Table 7 clearly show that CEO experience negatively and significantly impacts the financial performance of French companies. This indicates that firms led by more experienced CEOs tend to exhibit lower profitability and market valuation. Highly experienced CEOs may rely heavily on established routines and past strategies, which could reduce adaptability and responsiveness to rapidly changing market conditions. These findings can be interpreted through Upper Echelons Theory (Hambrick & Mason, 1984), which suggests that CEO's characteristics, including experience, influence strategic choices and organizational outcomes. This finding is consistent with Li and Singal (2017), who demonstrate a negative relationship between CEO experience and firm performance, but contrasts with the conclusions of Wang *et al.* (2016). The contradiction between our results and previous studies can be explained by the negative effects of excessive experience. This can lead to rigidity, resistance to change, or a limited ability to adapt to an evolving environment.

Therefore, the impact of experience depends on the context and the leader's ability to renew themselves. An experienced CEO may become overwhelmed by the large volume of information available, leading to decision-making paralysis that harms the company's performance. Such experience can also result in rigidity, causing the CEO to hold on to traditional practices at the expense of innovation and adaptability. Moreover, overconfidence might lead to judgment errors and risky strategies that negatively affect the company's overall performance. In fact, a highly experienced CEO may become overly attached to past strategies, making them less open to adopting new approaches that may be better suited to the current market dynamics.

Testing H9, the regression model reveals a negative and significant coefficient between CEO board membership and firm financial performance, as measured by MTB, at the 10 percent level. These findings can be interpreted through Agency Theory (Jensen & Meckling, 1976), which posits that overlapping roles between CEO and board membership may reduce monitoring effectiveness and create

potential conflicts of interest, thereby influencing firm performance. These results align with Yang and Zhao (2014), who argue that a CEO who is also a member of the board of directors can reduce conflicts of interest between management and the board, while aligning the company's strategic objectives with its daily operations, thus improving efficiency and profitability. However, no significant relationship is found between CEO board membership and firm financial performance when measured by ROA and Tobin's Q. CEOs who hold both roles may be reluctant to implement changes or strategies that could disrupt the status quo, potentially slowing the company's responsiveness to market changes.

Among the control variables, we observe that only leverage is significant in all three regression models.

4.4 Additional analyses

The COVID-19 pandemic provides a valuable point of comparison for examining how CEO profiles influence financial performance during periods of relative stability and deep crisis. Before the pandemic, companies operated in a stable environment where traditional strategies were sufficient. The pandemic disrupted this balance, necessitating rapid adaptation.

This period offers an opportunity to assess how CEOs' personal and professional profiles, including experience, age, and duality, influenced their leadership. It also reveals how these factors shaped their ability to protect or improve their companies' financial performance during the crisis. As an extension of our research, we analyzed our models by dividing the sample into observations from before the COVID-19 pandemic (2018-2019) and those from after the pandemic (2020-2021). As shown in Table 7, the results indicate that the relationships between CEO age, CEO duality, compensation, nationality, expertise, and the company's financial performance, as measured by ROA, remain significant, with consistent directional effects observed in both periods. The analysis of the same table suggests that the relationships between CEO tenure, compensation, nationality, and the company's financial performance, as measured by MTB, remained consistent before and after the COVID-19 pandemic. However, the relationship between the CEO's profile and the company's financial performance, as assessed by Tobin's Q, appears unchanged during both periods of the pandemic. CEO duality and CEO expertise seem to contribute to a decrease in the financial performance of companies under all circumstances. In contrast, executive compensation, gender, and nationality appear to have a positive impact on the financial performance of companies, both before and after the COVID-19 pandemic.

Table 8. Additional analysis: regressions of firm financial performance: COVID-19 Pandemic subsamples

Variable		ROA				MTB				Tobin's Q			
		Before COVID-19 Pandemic 2018-2019		After COVID-19 Pandemic 2020-2021		Before COVID-19 Pandemic 2018-2019		After COVID-19 Pandemic 2020-2021		Before COVID-19 Pandemic 2018-2019		After COVID-19 Pandemic 2020-2021	
	Predicted sign	Coeff	P-value	Coeff	P-value	Coeff	P-value	Coeff	P-value	Coeff	P-value	Coeff	P-value
AGD	-	3.725	0.000***	-2.139	0.002***	0.527	0.000***	0.438	0.001***	-0.129	0.107	-0.044	0.571
ACD	+/-	-0.057	0.000***	-.018	0.259	-0.020	0.000***	-0.009	0.000***	-0.004	0.003***	-0.005	0.002***
DUAL	-	-1.719	0.000***	-2.060	0.000***	0.095	0.005***	0.086	0.055*	-0.079	0.002***	-0.049	0.120
TURN	-	0.976	0.000***	-0.853	0.434	-0.102	0.053*	0.077	0.539	0.128	0.042**	0.371	0.000***
COMP	+	0.585	0.000***	0.742	0.000***	0.165	0.000***	0.230	0.000***	0.165	0.000***	0.237	0.000***
GEN	+	3.991	0.000***	0.332	0.813	0.313	0.000***	0.062	0.539	0.515	0.000***	0.370	0.000***
NATI	+	2.762	0.000***	1.081	0.000***	0.458	0.000***	0.399	0.000***	0.111	0.000***	0.089	0.015**
EXPER	+	-0.262	0.306	-1.355	0.000***	-0.260	0.000***	-0.080	0.108	-0.120	0.000***	-0.131	0.000***
MEMB	+	-0.051	0.875	0.306	0.615	-0.077	0.308	-0.057	0.425	0.102	0.005***	0 .063	0.091*
FS	+	-0.024	0.784	0.269	0.002***	-0.061	0.000***	-0.015	0.226	-0.081	0.000***	-0.107	0.000***
LEV	-	-3.453	0.000***	-7.633	0.000***	-0.845	0.000***	-1.513	0.000***	0.217	0.002***	-0.092	0.303
AGE	+	0.020	0.000***	0.017	0.000***	0.001	0.029**	0.003	0.000***	0.002	0.000***	0.002	0.000***
Number of observations		680		471		680		471		680		471	

Statistical significance: ***, **, and * de note significance at the 1%, 5%, and 10% levels, respectively. The dependent variable is represented by ROA,MTB and Tobin's Q.

4.5 Endogeneity problem

To ensure the robustness of our results, we employed models (1), (2), and (3) with various estimation techniques. The empirical analysis utilizes the generalized method of moments (GMM) developed by Roodman (2006), which builds upon the GMM methodology originally introduced by Arellano and Bover (1995). We opted for the two-step estimator, which offers greater robustness compared to the one-step approach that only accounts for homoscedasticity. This two-step estimator is also effective in addressing heteroscedasticity. Based on prior research, we utilized the two-step GMM estimator (Dang *et al.*, 2021) to address issues related to heteroscedasticity, autocorrelation, heterogeneity, and endogeneity with predetermined explanatory variables. As demonstrated in Table 9, the coefficients estimated using the two-step GMM closely align with our main findings. The results from the GMM regression shown in Table 9 are largely consistent with those obtained from the FGLS regression in Table 7. This consistency underscores the robustness of the study's conclusions regarding potential endogeneity issues in the relationship between CEO profiles and company financial performance. Therefore, our findings can be regarded as reliable. In summary, the outcomes from the two-step GMM estimations suggest that the main conclusions are unlikely to be affected by potential endogeneity concerns.

Table 9. Two-Step System GMM: ROA, MTB, Tobin's Q as a function of CEO profile

Variables	Predicted sign	ROA		MTB		Tobin's Q	
		Coef.	P-Value	Coef.	P-Value	Coef.	P-Value
AGD	-	-3.617	0.079*	0.241	0.515	-0.658	0.033**
ACD	+/-	-0.029	0.456	-0.472	0.004***	-0.045	0.002***
DUAL	-	-0.700	0.005***	-0.002	0.133	-0.541	0.005***
TURN	-	-0.547	0.324	-0.744	0.541	0.045	0.658
COMP	+	0.643	0.004***	0.004	0.007***	0.214	0.000***
GEN	+	2.471	0.155	-0.365	0.214	0.254	0.000***
NATI	+	0.572	0.004***	0.033	0.003***	0.547	0.000***
EXPER	+	-0.016	0.003***	-0.321	0.000***	-0.542	0.000***
MEMB	+	0.474	0.036**	-0.587	0.001***	-0.156	0.965
SIZE	+	-0.365	0.004***	-0.179	0.541	-0.135	0.003***
LEV	-	-2.549	0.011**	-1.100	0.005***	0.354	0.000***
AGE	+	0.015	0.027**	0.047	0.635	0.041	0.008***
Industry fixed effect		YES		YES		YES	
Year fixed effect		YES		YES		YES	
Firm fixed effect		YES		YES		YES	
Arellano-Bond test for AR(1)		-1.34 (p = 0.141)		-1.18 (p = 0.326)		-1.14 (p = 0.214)	

Variables	Predicted sign	ROA Coef.	ROA P-Value	MTB Coef.	MTB P-Value	Tobin's Q Coef.	Tobin's Q P-Value
Arellano-Bond test for AR(2)		0.11 (p = 0.773)		-1.01 (p = 0.323)		-2.14 (p = 0.021)	
Sargan test		1000.25 (p = 0.000)		1300.00 (p = 0.000)		2248.32 (p = 0.000)	
Hansen test		72.66 (p = 1.000)		102.32 (p = 1.000)		101.05 (p = 1.000)	
Fisher		244.86***		372.55***		554.04***	
Number of observations		1510		1510		1510	

Statistical significance: ***, **, and * de note significance at the 1%, 5%, and 10% levels, respectively. The dependent variable is represented by ROA, MTB and Tobin's Q.

5. Conclusion and policy recommendations

The objectives of this paper are twofold: first, to test the impact of the CEO's nationality, expertise, and gender on firm financial performance; and second, to employ robustness checks to enhance the reliability of the results obtained from the initial regression. Utilizing a sample of 151 French-listed firms over the period from 2014 to 2023, the empirical results demonstrate that both the quantitative and qualitative characteristics of a CEO have multiple effects on firm financial performance.

The findings of this study regarding CEO turnover show that it does not have a significant effect on firm financial performance (ROA, MTB, and Tobin's Q). However, CEO compensation and CEO nationality do have a significant effect on firm financial performance, as measured by ROA, MTB, and Tobin's Q. In contrast, CEO gender exhibits a positive and significant effect on firm financial performance, specifically when measured by Tobin's Q. The results obtained from our research motivate us to advocate for good governance principles aimed at curbing opportunistic behavior among managers. Our findings have important implications for both theory and practice.

The study shows that a company's financial performance reflects the values, experiences, and traits of its top executives. CEO characteristics, including demographic and job-specific factors, significantly influence financial outcomes, supporting upper echelons theory. It also confirms the relevance of leadership and agency theories, while suggesting they may need updates to reflect current trends. The study provides practical implications for scholars, stakeholders, regulators, and policymakers. It emphasizes the importance of CEO characteristics, including nationality, experience, and role duality, in shaping firm financial performance. Researchers are encouraged to consider these traits in future studies. For shareholders and investors, CEO profiles offer guidance for appointments and

investment decisions, helping identify high-potential companies and optimize portfolios.

However, the study has some limitations. The sample size was constrained by data availability from 2014 to 2023, which limited the breadth of the analysis. Additionally, some variables lacked comprehensive measures, and challenges in data collection restricted the examination of additional behavioral biases and demographic traits among CEOs. Future studies could enhance our understanding by investigating how other managerial characteristics, such as religion, marital status, and educational background, impact earnings management and firm performance. Furthermore, future research could expand to include all French firms listed on the CAC All Shares Index across various sectors, including financial companies, to allow for sector-specific comparisons. This research raises important questions that warrant further investigation, particularly regarding the validation of the impact of CEO nationality on firm outcomes.

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