The impact of CEO turnover on firm performance and insolvency risk - A global analysis

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ARTICLE INFO

ABSTRACT

This research examines the impact of CEO change on company performance by analyzing a global sample of publicly listed firms. The findings demonstrate a significant positive association between CEO change and improvement in a company's Z-Score, indicating the strategic change that a new CEO can bring all over the world regardless of the corporate governance model adopted and cultural differences. The study also finds that the positive impact of CEO turnover on firm performance is present only in the short term (first two years) and are more evident for companies in crisis.

1. Introduction

The global impact of the COVID-19 pandemic has forced businesses to adapt strategically to address challenges such as shifting consumer behavior, supply chain disruptions, and government-imposed closures. Quick adoption of strategic change has proven essential for resilience (Goodell, 2020). Strategic change involves altering an organization's direction to align with evolving circumstances, markets, and competition, driving growth and competitiveness (Wenzel et al., 2021). The CEO's role is pivotal in a company's strategic direction and overall success (Haque et al., 2022), with CEOs and boards significantly influencing strategy and performance (Linck et al., 2008). CEO turnover, closely tied to a company's performance, becomes critical for future development and growth.

This study contributes to the existing literature on CEO turnover's impact on company performance globally. Prior research has indicated a positive link between CEO turnover and improved firm performance, suggesting it can drive strategic changes (Dallocchio et al., 2022; Bennedsen et al., 2020; Lin et al., 2020). However, these findings have not been consistently replicated in all studies (Colantoni, 2023; Hilger et al., 2013).

Our study contributes to two strands of literature. Firstly, our research brings forth novel insights by unveiling a positive impact of CEO turnover on company performance. This effect persists irrespective of corporate governance models or cultural differences. Notably, our findings underscore the heightened prominence of this positive impact in the short term, specifically during the initial two years following the CEO's appointment. This aligns seamlessly with prior research, notably Jensen and Murphy (1990), establishing a foundation for understanding the immediate and tangible benefits associated with changes in executive leadership.

Secondly, the study suggests that the new CEO's impact diminishes after this initial period, highlighting the gradual decrease in the effectiveness of new strategies over time. Additionally, our results align with the insights presented by Lin et al. (2020), emphasizing

the pivotal role of a new CEO in not only enhancing a firm's overall performance but also significantly bolstering its chances of survival, particularly in the face of corporate crises.

From a practical point of view, organizations should be mindful of this temporal window when assessing the impact of CEO transitions on performance. Therefore, firms may consider strategically planning for CEO transitions, aiming to capitalize on the short-term boost in performance observed during the first two years after a new CEO's appointment. However, strategies implemented by a new CEO should be aligned with the organization's long-term goals to ensure continued success beyond the initial period.

2. Literature review

CEO turnover may occur for various reasons. For decades, research in the areas of strategic leadership and governance has placed significant importance on comprehending the reasons and outcomes of CEO succession, as evidenced by numerous scholars (e.g. Gentry et al., 2021).

Therefore, researchers have shown considerable interest in exploring the consequences of CEO turnover for companies, largely due to the expectation that it significantly affects a firm's performance (Gentry et al., 2021). In this sense, agency theory posits that the interests of firm owners and CEOs may diverge, particularly in the long term when the distinct structures of their compensation become more apparent . Consequently, CEO renewal may become imperative for realigning the interests between firm owners and managers. Therefore, recent literature has extensively examined the consequences of CEO renewal as an extraordinary event impacting all company processes, from strategy to performance (Schepker et al., 2017). However, the relationship between CEO turnover and firm performance is intricate, involving a cost-benefit analysis, and several studies have delved into this relationship (Hilger et al., 2013). Prior research has indicated that a company's management team plays a pivotal role in influencing its performance (Yukl, 2008), making the replacement of CEOs a potentially influential factor in future profitability. The appointment of new executives following the removal of the previous management team can create an environment conducive to implementing significant changes within the company, potentially fostering innovation and ensuring future growth (Hilger et al., 2013). Therefore, existing literature has also highlighted the potential negative effects of CEO turnover on a firm's financial performance, particularly when the new CEO's strategic plans do not align with the company's structure and relationships (Schepker et al., 2017). A new CEO's decisions and integration into the organization can significantly affect managerial performance (Barros et al., 2022).

Consequently, past research has proposed conflicting viewpoints on the association between CEO succession and a company's performance, with some studies indicating a positive impact (Bennedsen et al., 2020) and others demonstrating negative outcomes (Hilger et al., 2013). Therefore, further research is essential to better grasp the effects of CEO turnover on a firm's performance, particularly on a global scale.

Our research proposes a hypothesis that a CEO turnover during a crisis can positively impact a company's financial performance, regardless of the corporate governance system in place. We do believe that a new CEO can introduce new human and relational capital and insert new strategic actions which could enhance a company's organizational and financial performance, regardless of the governance system (Kim et al., 2021).

Hypothesis 1 (HP1). *The financial performance of a company is positively influenced by the replacement of the CEO.*

The timing of CEO turnover is crucial in understanding its impact on firm performance. Early research (Jensen and Murphy, 1990) found a significant negative impact on a company's stock price immediately after CEO turnover, but this effect diminished in the long run, suggesting limited long-term effects (Bennedsen et al., 2020). However, some studies suggest positive long-term effects (Hambrick and Fukutomi, 1991).

Our expectation is that CEO turnover exerts a positive impact in the short term, driving notable improvements in various aspects of company performance. However, we posit that its long-term ramifications may be constrained, primarily attributed to the gradual waning of momentum associated with the implementation of new strategies. The need for sustained exploration and comprehensive investigation arises from the intricate dynamics involved in the unfolding narrative of CEO turnover effects.

Hypothesis 2 (HP2). *A new CEO's appointment has a positive impact on a company's financial performance in the short term, but not in the long term.*

The relationship between CEO turnover and a firm's likelihood of default has garnered significant attention in corporate governance and management. Several studies have examined this relationship, but results are mixed (Colantoni, 2023), possibly due to research design limitations. Some studies focus on specific industries or regions, limiting generalizability or fail to adequately control for other factors affecting default probability, such as firm size.

A crisis is often a trigger for innovation (Wenzel et al., 2021), and, therefore, the replacement of management represents a significant point of discontinuity for the company, which may be necessary when the company is in an irreversible state of crisis.

In this sense, a new CEO in a crisis situation is one of the most effective measures that a company can take, as it brings in new human capital as well as relational capital, which includes social connections and networks. Thus, we propose the following hypothesis:

Hypothesis 3 (HP3). *A company in crisis can experience a positive impact on its financial performance with the renewal of the CEO.*

Table 1
Variable Description.

Variable	Description
Z- Score $T+1/2/3 > T$-0	Delta in the Z-Score of the company between T-1 and $T+1$ (Model 1), $T+2$ (Model 2), $T+3$ (Model 3)
Dummy CEO	Dummy variable equal to 1 if there is a change of the management at T-0.
ROA Delta	Delta in the ROA of the company between T-1 and $T+1$ (Model 1), $T+2$ (Model 2), $T+3$ (Model 3). The ROA is calculated using net operating income divided by total assets.
Liquidity Delta	Delta in the liquidity ratio of the company between T-1 and $T+1$ (Model 1), $T+2$ (Model 2), $T+3$ (Model 3). The liquidity ratio is calculated as the ratio of cash and cash equivalents to current liabilities.
Leverage Delta	Delta in the leverage ratio of the company between T-1 and $T+1$ (Model 1), $T+2$ (Model 2), $T+3$ (Model 3). The leverage ratio is calculated using as the book value of long-term debt over the market value of common equity
Asset Delta	Delta in the total assets of the company between T-1 and $T+1$ (Model 1), $T+2$ (Model 2), $T+3$ (Model 3).
Turnover Year	Factor variable for controlling the turnover year of the CEO (2015, 2016, 2017, 2018)
Sector	Factor variable for controlling the sector effect
Country	Factor variable for controlling the country effect
CEO Effects	Factor variable for controlling the CEO effect

3. Materials and methods

3.1. Research design

To assess the impact of CEO turnover on financial performance, we employ two models: fixed effect regression and random forest. Fixed effect regression is commonly used in economic and finance studies due to its established utility in predicting events. Given the endogenous nature of top management changes (Fee et al., 2013), our analysis considers economic and governance factors at the board or firm level, in addition to CEO-fixed effects, as suggested by Bennedsen et al. (2020).

The random forest model is known for its robustness, avoidance of overfitting, and ability to handle mixed data types effectively. Moreover, the model is selected for its superior performance in comparison also with tradition statistical models (Dallocchio et al., 2022), and it consistently outperform other traditional machine learning algorithms when applied to finance prediction tasks (Katsafados et al., 2024). However, using machine learning techniques like random forest can be challenging in terms of interpretability and transparency. To address this, we utilize Relative Variable Importance (RVI) metrics, which indicate the average frequency of a variable's usage within the decision trees of the model, expressed on a scale of 0 to 1. An RVI greater than 0 indicates that the variable contributes to enhancing the model's predictive capabilities (Hastie et al., 2009).

3.2. Data

The dataset used for this study combines financial data from Orbis and CEO turnover information from BoardEx People Intelligence. It covers globally listed corporate companies from 2015 to 2021. To ensure a substantial post-CEO turnover data period for analysis, we initially filter the dataset to include companies that experienced CEO turnover between 2015 and 2018. Further data enrichment involves cross-referencing information to pinpoint the year of CEO turnover.

The dataset is categorized by industry and geographic location to explore potential relationships between turnover impacts and these factors. To focus on influential companies in the global stock market, firms with relatively modest size criteria—market capitalization less than $10 million, total assets below $50 million, and total revenues below $1 million—are excluded from the analysis. This results in a sample of 6314 listed corporate companies, with approximately half of them experiencing CEO turnover. We carefully select companies without CEO turnover, considering factors like country, size, and sector to ensure comparability with the turnover group.

It's important to note that this study does not distinguish between forced and voluntary CEO turnover, as public records often lack explicit reasons for termination. Prior research, including Cao et al. (2017), suggests that differentiating between these types of CEO dismissals based on public information is challenging due to various reasons for CEO departures. Out of the initial sample, 3157 companies replaced their CEO between 2015 and 2018, while the remaining 3157 retained the same CEO during the same period. The final sample is well-distributed across countries and sectors.

3.3. Data description

To objectively measure improvements in a company's economic-financial performance, we utilize the Altman Z-Score, initially developed by Altman (1968). The choice of the Altman Z-Score as a proxy for assessing improvements in financial performance is grounded in its reliability, supported by authors like Altman et al. (2017). Unlike traditional methods such as ROA, the Z-Score is able to anticipate crises by detecting the relationship between corporate default and accounting indicators before insolvency enables proactive management.

To objectively evaluate the impact of CEO change on a company's performance in the short and long term, we use the change in the Z-Score across three periods as the dependent variable:

Table 2
Descriptive Statistics of the Variables.

All Sample	N	P1	Mean	P50	P99
Z- Score $T + 1$	6314	−6.51	1.98	0.92	6.02
Z- Score $T + 2$	6314	−6.01	1.01	0.88	6.21
Z- Score $T + 3$	6314	−5.72	2.04	0.88	6.18
ROA Delta +1	6314	−19.96	−1.63	−0.52	7.55
ROA Delta +2	6314	−19.70	−1.88	−0.84	7.46
ROA Delta +3	6314	−19.06	−1.45	−0.76	8.09
Liquidity Delta +1	6314	−1.14	0.65	−0.07	2.21
Liquidity Delta +2	6314	−1.14	0.67	−0.07	2.24
Liquidity Delta +3	6314	−1.16	0.62	−0.08	2.13
Leverage Delta +1	6314	−0.61	−0.25	−0.33	−0.03
Leverage Delta +2	6314	−0.61	0.21	−0.32	−0.02
Leverage Delta +3	6314	−0.61	−0.25	−0.32	−0.02
Asset Delta +1	6314	−1.79	2.68	2.59	5.21
Asset Delta +2	6314	−1.31	2.78	2.67	5.28
Asset Delta +3	6314	−0.89	2.87	2.75	5.34

Table 3
Descriptive Statistics of the Sample.

Year	#	Country	#	Sector	#
2015	1328	Far East and Central Asia	2860	Property Services	305
2016	1414	North America	1548	Retail	289
2017	1522	Western Europe	1124	Communications	253
2018	2050	Oceania	298	Food & Tobacco Manufacturing	295
		South and Central America	332	Transport, Freight & Storage	295
		Middle East	80	Computer Software	119
		Eastern Europe	48	Media & Broadcasting	118
		Africa	24	Metals & Metal Products	296
				Industrial, Electric & Electronic Machinery	914
				Leather, Stone, Clay & Glass products	137
				Public Administration, Education, Health Social Services	111
				Business Services	307
				Mining & Extraction	390
				Travel, Personal & Leisure	224
				Utilities	243
				Computer Hardware	70
				Transport Manufacturing	221
				Chemicals, Petroleum, Rubber & Plastic	680
				Construction	231
				Printing & Publishing	57
				Agriculture, Horticulture & Livestock	63
				Miscellaneous Manufacturing	54
				Biotechnology and Life Sciences	65
				Wood, Furniture & Paper Manufacturing	135
				Textiles & Clothing Manufacturing	125
				Wholesale	248
				Banking, Insurance & Financial Services	56
				Waste Management & Treatment	13

- between T-1 (the year before in which the new CEO is appointed) and $T + 1$ (one year after the appointment of the new CEO)
- between T-1 and $T + 2$ (two years after the appointment of the new CEO)
- between T-1 and $T + 3$ (three years after the appointment of the new CEO)

The study's variables are outlined in Table 1.

Tables 2 and 3 show the descriptive statistics of the variable and of the sample.

The results of the correlation analysis can be seen in Table 4.

Additionally, we conducted Variance Inflation Factor, Shapiro and Breusch Pagan tests to verify that the assumptions of multi-collinearity, normality and homoscedasticity were not violated, and the results showed no significant evidence to the contrary.

4. Results

Initially, in order to test HP1 e HP2, we conducted a fixed effect analysis to evaluate the impact of CEO change on a company's Z-Score increase. The fixed effect models were run for three different periods: T-1 and $T + 1$ (Model 1), T0 and $T + 2$ (Model 2), and T0
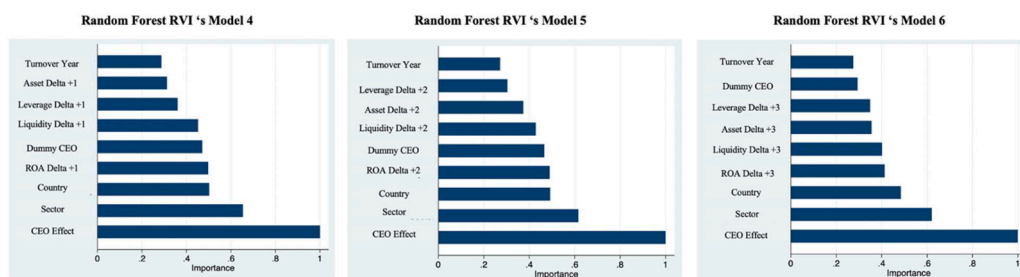
Table 4

Correlation analysis.

	Z − ScoreT+3	Z − ScoreT+2	Z − ScoreT+1	DunmyCEO	ROADelta+3	ROADelta+2	ROADelta+1	LiquidityDelta+3	LiquidityDelta+2	LiquidityDelta+1	LeverageDelta+3	LeverageDelta+2	LeverageDelta+1	AssetDelta+3	AssetDelta+2	AssetDelta+1
Z- Score $T+3$	1.00															
Z- Score $T+2$	0.8048*	1.00														
Z- Score $T+1$	0.7417*	0.9137 *	1.00													
Dunmy CEO	−0.0180	0.0152*	0.0180°	1.00												
ROA Delta +3	0.0968*	0.0224*	0.0413*	−0.0194	1.00											
ROA Delta +2	0.0861*	0.0194	0.0247*	−0.0113	0.5744*	1.00										
ROA Delta +1	0.0272*	− 0.0340*	−0.0162	−0.0171	0.5278°	0.6338*	1.00									
Liquidity Delta +3	0.1432*	0.0262*	0.0544*	− 0.0386*	− 0.0626*	− 0.0920*	− 0.1116*	1.00								
Liquidity Delta +2	0.1112*	0.0316*	0.0643*	− 0.0384*	− 0.0971*	− 0.0812*	− 0.0920*	0.7881*	1.00							
Liquidity Delta +1	0.1047*	0.0238*	0.0718*	− 0.0285*	− 0.1093*	− 0.0988*	− 0.0793*	0.6757*	0.6780°	1.00						
Leverage Delta +3	− 0.797*	− 0.9840*	− 0.8883*	0.0118	−0.0184	− 0.0248°	0.0307*	− 0.0230*	− 0.0240*	− 0.0225*	1.00					
Leverage Delta +2	− 0.7870*	− 0.9927*	− 0.8928*	0.0125	−0.0037	−0.0041	0.0430*	−0.0082	−0.0086	−0.0085	0.9896*	1.00				
Leverage Delta +1	− 0.7926*	− 0.9919*	− 0.8954*	0.0124	−0.0077	−0.0109	0.0353*	−0.0168	−0.0185	−0.0190	0.9949*	0.9982*	1.00			
Asset Delta +3	−0.0207	0.0348*	0.0140	0.0485°	0.1270°	0.1448*	0.1493*	− 0.1771*	− 0.1802*	− 0.1827*	− 0.0273*	− 0.0443*	− 0.0321*	1.00		
Asset Delta +2	−0.0166	0.0428*	0.0109	0.0418*	0.1107°	0.1505*	0.1635°	− 0.1814*	− 0.1815*	− 0.1837*	− 0.0368+	− 0.0549*	− 0.0422*	0.9907*	1.00	
Asset Delta +1	− 0.0330*	0.0288*	0.0013	0.0415*	0.1110*	0.1364*	0.1665*	− 0.1886*	− 0.1894°	− 0.1929*	− 0.0240°	− 0.0426°	− 0.0296*	0.9790*	0.9902*	1.00

Table 5
Fixed Effect results Model 1–2–3.

Dependent variable	Z- Score $T+1$	Z- Score $T+2$	Z- Score $T+3$
Models	(1)	(2)	(3)
Independent variables			
Dummy CEO	0.280*	0.170*	−0.209
	(0.125)	(0.522)	(0.418)
ROA Delta +1	0.101***		
	(0.0267)		
ROA Delta +2		0.165***	
		(0.0231)	
ROA Delta +3			0.163***
			(0.0228)
Liquidity Delta +1	0.570***		
	(0.212)		
Liquidity Delta +2		0.750***	
		(0.164)	
Liquidity Delta +3			0.858**
			(0.418)
Leverage Delta +1	−7.933***		
	(0.0122)		
Leverage Delta +2		−2.620***	
		(0.00126)	
Leverage Delta +3			−5.518***
			(0.0431)
Asset Delta +1	−0.403		
	(0.317)		
Asset Delta +2		−0.738**	
		(0.318)	
Asset Delta +3			−0.361**
			(0.148)
Costant	0.0983	2.347**	2.592
	(1.016)	(1.013)	(2.871)
Control Turnover Year	YES	YES	YES
Control Sector	YES	YES	YES
Control Country	YES	YES	YES
CEO Effects	YES	YES	YES
Observations	6314	6314	6314

***, **, and * indicates statistically significant levels of 1%, 5% and 10%, respectively.

Fig. 1. Random Forest RVI's Model 4–5–6.

and $T+3$ (Model 3), as shown in Table 5.

The results of the models showed that the variable Dummy CEO is statically significant with a positive impact on the Z-Score increase in Models 1 and 2. The coefficient for Dummy CEO is higher in Model 1 compared to Model 2, but in Model 3, the impact of CEO turnover on Z-Score increase is not statistically significant. In all models, the control variables used were statically significant.

In addition, we also employed random forest models to analyze the relationship between CEO change and Z-Score increase. The RVIs, reported on a scale from 0 to 1, are presented in Fig. 1.

The findings from the random forest model confirm previous results: CEO turnover has a positive short-term effect on company performance regardless of location, but this effect diminishes in the long term. All variables contribute to the models' predictive accuracy, but the influence of each variable, as measured by RVIs, varies significantly. In both Model 4 and 5, the variable Dummy CEO has an RVI value close to 0.5 and consistently ranks as one of the most important variables in the models. However, in Model 6, similar

Table 6
Fixed Effect results Model 7–8–9.

Dependent variable	Z- Score $T + 1$	Z- Score $T + 2$	Z- Score $T + 3$
Models	(7)	(8)	(9)
Independent variables			
Dummy CEO	−0.280*	−0.373	−0.363
	(0.390)	(0.673)	(0.386)
Status	−0.763	−1.075	−0.437
	(0.580)	(0.646)	(0.280)
Intercation Factor Status - Dummy CEO	0.417*	0.569*	0.320
	(0.242)	(0.252)	(0.224)
ROA Delta +1	0.0231		
	(0.0756)		
ROA Delta +2		0.165***	
		(0.0433)	
ROA Delta +3			0.158***
			(0.0341)
Liquidity Delta +1	0.673*		
	(0.401)		
Liquidity Delta +2		0.876***	
		(0.250)	
Liquidity Delta +3			0.355**
			(0.150)
Leverage Delta +1	−17.05**		
	(0.117)		
Leverage Delta +2		−6.332***	
		(1.275)	
Leverage Delta +3			−6.263***
			(0.088)
Asset Delta +1	0.188*		
	(0.502)		
Asset Delta +2		−0.441	
		(0.351)	
Asset Delta +3			−0.120
			(0.149)
Costant	−4.164	0.580	−0.464
	(0.066)	(0.760)	(0.645)
Control Turnover Year	YES	YES	YES
Control Sector	YES	YES	YES
Control Country	YES	YES	YES
CEO Effects	YES	YES	YES
Observations	3152	3144	3156

***, **, and * indicates statistically significant levels of 1%, 5% and 10%, respectively.
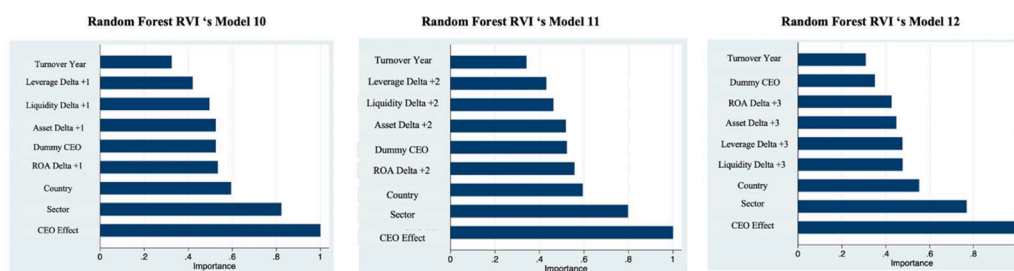
Fig. 2. Random Foret RVI's Model 10–11–12.

to the results of Model 3, Dummy CEO is one of the less significant variables.

To test HP3, we introduced a dummy variable named Status, set to 1 if the initial Z-Score is lower than the default threshold of 1.8. This dummy variable helps identify companies in crisis, given the reliability of the Z-Score. Subsequently, we re-ran the fixed effect models by including an interaction term between the Dummy CEO variable and the Status variable to capture the differential effect of CEO turnover between healthy and crisis-stricken companies.

The fixed effect models were applied over three distinct periods, as outlined in Table 6.

The results of the models showed that the variable Dummy CEO is statically significant with a negative impact on the Z-Score increase in Models 7 while it is not statistically significant in Model 8 and 9. However, more interesting for HP3, is the fact that the interaction factor turns out to be positively statistically significant in model 7 and 8 while not in model 9. Therefore, this highlights the

Table 7
Idiosyncrasy Factors.

Idiosyncrasy Factor	Possible Variations Across Jurisdictions
Corporate Governance Models	Diverse structures influencing decision-making
Cultural Differences	Varied norms shaping CEO reception and strategies
Legal and Regulatory Frameworks	Differences affecting ease of executive transitions
Market Maturity	Influence on strategy effectiveness and outcomes
Industry Specificities	Sector-specific impact on performance and risk
Ownership Structures	Influence on organizational responsiveness to CEO changes
Political Stability	Introduction of uncertainties affecting performance
Technological Landscape	Variances in technology adoption and innovation impact
Market Competition	Influence on competitive strategies and outcomes
Consumer Behavior	Shaping success of product or service strategies
Access to Capital	Impact on financial recovery post-CEO turnover
Environmental and Social Factors	Regional disparities influencing public perception

fact that the CEO turnover has more evident positive effects for companies in crisis while his/her impact seems to be negative for healthy companies.

To strengthen our results for HP3, in Fig. 2 we also employ random forest models using as a sample made up of only companies with a Z-Score under the default threshold of 1.8.

The findings of the random forest model reinforce the conclusions drawn from the fixed effect model analysis.

4.1. Robustness checks

To ensure the reliability of our findings, we conducted several tests. Initially, we employed a 10-fold cross-validation technique to validate the outcomes of the random forest model. Cross-validation with 10 folds is a widely used method in practical machine learning, aiming to assess the performance of a machine learning model on unseen data (Hastie et al., 2009). These results did not significantly alter our previous conclusions. Furthermore, we used an alternative performance metric, the change in Tobin's Q ratio, instead of the Z-Score to evaluate the impact of CEO change. Tobin's Q ratio is forward-looking and less influenced by accounting methods (Tron and Colantoni, 2021). The outcomes reaffirmed the findings from our earlier analysis.

5. Conclusion

By examining a global dataset and not limiting the analysis solely to the US context (Lin et al., 2020), our research validates earlier findings (Kim et al., 2021; Fee et al., 2018) that changing a CEO can improve both the organizational and financial performance of a company. Moreover, the results confirm that the arrival of a new CEO has a positive impact on the company's performance, and it can increase the chances of survival during a corporate crisis, independently from the idiosyncrasies resulting from CEO turnover and its impact on company performance and insolvency across different regions, as shown in Table 7.

The appointment of a new CEO can lead to strategic change that can encourage the introduction of innovative processes or products. The significance of taking swift action in crisis management aligns with the perspectives of multiple scholars (Parnell and Crandall, 2020; Tron, 2021). Furthermore, our analyses indicate that CEO turnover appears to have a positive impact on a company's performance during a crisis, in accordance with prior research (Morrone et al., 2021), whereas its effect seems to be negative for a healthy company. Therefore, it is crucial for companies to embrace strategic change, and for boards to consider CEO turnover as a strategic decision that can impact the company's future growth and development. However, our research also reveals that this effect is only significant in the short term (up to two years) and is consistent with previous studies (Gaur and Lu, 2007). These findings suggest that the efficacy of new strategies implemented by a new CEO tends to decline over time.

From a practical standpoint, our findings have substantial implications for corporate governance practices, emphasizing the significance of strategic change in organizations to stay competitive. Companies that fail to adapt may risk losing their market position to more agile and innovative competitors.

Our study underscores the temporal dynamics of CEO impact, suggesting future investigations into sustained strategy effectiveness. This insight can shape strategic management frameworks, considering the evolving influence of executives on company performance. Recognizing the time-sensitive nature of a new CEO's impact is crucial for evaluating implications on firm-driven insolvency risk. With findings indicating diminishing strategy effectiveness over time, practitioners and policymakers can proactively mitigate insolvency risks during executive transitions. Acknowledging these temporal dynamics allows organizations to implement targeted measures, ensuring enduring financial stability.

While our research provides valuable insights, there are potential limitations, such as the focus on publicly listed firms, which may not represent the entire business landscape. Using alternative Z-Score measures and incorporating modern techniques like machine learning could further enhance the study's robustness. Future research may explore how corporate governance and ESG indicators influence the likelihood of a successful turnaround process, offering deeper insights into this complex relationship.

CRediT authorship contribution statement

Antonio Salvi: Conceptualization, Formal analysis, Writing – review & editing, Methodology, Writing – original draft. **Alberto Tron:** Conceptualization, Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing. **Federico Colantoni:** Conceptualization, Data curation, Formal analysis, Software, Writing – original draft, Writing – review & editing.

Declaration of competing interest

None.

Data availability

The authors do not have permission to share data.

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