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CEO Type and Firm Performance: Evidence from Nasdaq Baltic

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Abstract. Despite the well-established characteristics of shareholder-CEOs and professional-CEOs, previous research has yielded inconclusive findings on the actual impact of the separation of shareholding and management on firm financial performance. This study aimed to address this gap by going off the beaten path of research centered on the U.S.-listed firms and investigating 55 firms listed on the Nasdaq Baltic market in the post-Soviet countries of Estonia, Latvia, and Lithuania from 2017 to 2021. While professional-CEO-led firms displayed higher Tobin's Q (M = 1.37) compared to shareholder-CEO-led firms (M = 1.17), and shareholder-CEO-led firms had a higher average ROE (M = 7.76%) compared to professional-CEO-led firms (M = -1.74%), independent samples t-test analysis revealed that these differences in either stock market performance (p = .250 > .05) or shareholder return (p = .193 > .05) were statistically insignificant. These findings challenge organizational life cycle theory and agency theory predictions, aligning instead with stewardship theory and upper echelons theory, suggesting that CEO characteristics, motivation, and actions, while clearly distinct for shareholder-CEOs and professional-CEOs, are not the sole determinant of financial performance in mature firms. Accordingly, shareholder-CEOs, other stockholders, and boards of directors should draw support from these findings in their considerations regarding firm leadership.
Keywords: shareholder-CEO, professional-CEO, firm performance, agency theory, stewardship theory, organizational life cycle theory.

1. Introduction

Shareholder-managed firms, historically pivotal in driving economic development, face challenges like resource limitations as they grow, hindering further expansion (Gedajlovic et al., 2004). Picken (2017) emphasizes that the competencies and incentives required to establish a new firm differ significantly from those needed to manage a rapidly expanding firm in a competitive environment. This observation aligns with the organizational life cycle theory, which suggests that firms undergo managerial specialization and a separation of ownership and control as they grow (Bandiera et al., 2018). This shift is accompanied by a transition from entrepreneurialism to professional management (S.-Y. Lee & Ko, 2022; Watson, 1995).

The achievement of a firm, irrespective of its size, hinges upon the caliber of its management (Watson, 1995). Hence, the role of the leader of top management team – the

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chief executive officer (CEO) – is highly critical within the management hierarchy, and their attributes are believed to play a pivotal role in the firm's success (Altarawneh et al., 2020). Within the scientific literature, CEOs are typically classified into three prominent categories: founder/shareholder-CEOs, family-CEOs, and professional-CEOs. Founder/shareholder-CEOs are individuals who both own at least part of the firm and serve as the CEO of that same firm, while family-CEOs are individuals who hold the position of a CEO within a firm and are members of the same family that owns a significant stake or has a controlling interest in the firm. On the other hand, a professional CEO has no direct or indirect shareholding in the firm and is an experienced executive who assumes leadership of a firm because of the requisite skills and expertise. For this study, the category of family-CEOs, who possess equity/shares in firms in the same manner as shareholder-CEOs, is treated as shareholder-CEOs.

Shareholder-CEOs exhibit reduced agency conflicts in the view of agency theory and enjoy increased legitimacy in conferring strategic leadership and entrepreneurial agility (Chittoor et al., 2019). They concentrate on innovation (J. M. Lee et al., 2020) and are prone to overconfidence and favorable forecasts (J. M. Lee et al., 2017), in addition to being more disposed toward risk-taking (Tang et al., 2016). However, they possess weaker managerial skills for a growing firm (Wasserman, 2003) and typically depend more on intuitive decision-making (Gedajlovic et al., 2004). Professional-CEOs who act as agents from the perspective of agency theory, on the other hand, possess formal education and managerial training, bringing new managerial talents, knowledge, networks, and resources to a firm (J. M. Lee et al., 2017; S. Lin & Hu, 2007). They tend to create more mechanic structures and place more emphasis on formal strategy development (Watson, 1995).

Scholars have examined the contrasting characteristics and behaviors of professional-CEOs, who are often self-interested, with the stewardship behaviors of shareholder-CEOs, who balance their interests with those of a firm (S. Y. Lee & Ko, 2022). While differences in the characteristics of the two types of CEOs are well-established in the scientific literature, in the context of financial performance disparities between companies under the leadership of shareholder-CEOs and those led by professional-CEOs, extant research presents a nuanced picture (Altarawneh et al., 2020). While a substantial body of literature suggests the existence of noteworthy variations in financial performance outcomes, a notable segment of scholarly investigations fails to discern statistically significant differences in this regard (e.g., Willard et al., 1992; Daily & Dalton, 1992; Jayaraman et al., 2000; Gao & Jain, 2011; Emestine & Setyaningrum, 2019; S.-Y. Lee & Ko, 2022). Given that a compelling argument can be made for the principal objective of any firm being the increase of shareholder value, particularly when considering the heightened significance of financial performance concerning firms, this aspect holds paramount importance for both management practitioners and scholars in the present context.

Given the incongruities in previous research, a fundamental motivation behind this investigation is to contribute to the knowledge in the field regarding performance disparities between firms governed by either type of CEO. Hence, the objective of this study is

twofold. Firstly, it aims to examine the impact of CEO characteristics on firm behavior and subsequently firm performance, drawing upon existing scientific literature. Secondly, it seeks to contribute to the existing body of knowledge by investigating if the financial performance differences between firms led by shareholder-CEOs and those led by professional-CEOs exist in a previously unexplored context. More specifically, grounded in the foundations of agency theory and building upon the established trajectory of prior research within this domain, the present study posits hypotheses aimed at investigating the potential presence of statistically significant disparities in accounting-based and market-based firm financial performance.

While previous scholarly research has predominantly focused on firms listed on the United States (U.S.) stock exchanges, there has been limited investigation into the financial performance of publicly traded firms in other regions, such as Europe, Asia, or other economies. To broaden the scope of research in this field, this study examines the performance of a sample comprising all 55 firms from the Nasdaq Baltic stock market, which includes the stock exchanges of Riga, Tallinn, and Vilnius, during the period from 2017 to 2021. Drawing upon the methodological framework advanced in contemporary research within the field (e.g., Kim & Kiymaz, 2021; Kumar et al., 2021; Emestine & Setyaningrum, 2019), Tobin's Q is utilized as a market-based metric for assessing firm performance. Additionally, return on equity (ROE) is employed as an accounting-based indicator, aligning with the perspective of agency theorists. The independent samples t-test serves as a statistical tool employed to ascertain the presence of statistically significant disparities in financial performance between firms under the leadership of shareholder-CEOs and those led by professional-CEOs.

The Baltic nations offer an intriguing context for studying performance differences between CEO types, given the recent establishment of private sector firms following the collapse of the Soviet Union. Estonia, Latvia, and Lithuania have made remarkable progress in adopting market economy principles (EBRD, 2022; Duvold et al., 2020) and decentralizing decision-making authority from the state to the firm level (Lainela, 2000). During this same period, within newly established private sector firms, the CEO position was predominantly occupied by either the sole shareholder or one of the shareholders. In line with the rationale by the organizational life cycle theorists, some shareholder-CEOs have been succeeded by professional-CEOs due to evolving managerial skill requirements, others have retired due to factors such as age, health, or personal circumstances, while a considerable number of shareholder-CEOs continue to lead their firms.

To achieve the research objectives, this study first establishes initial performance contrasts between firms led by shareholder-CEOs and professional-CEOs based on the findings of previous researchers. It then employs an empirical research approach and presents the findings of the empirical investigation. Subsequently, the outcomes of the empirical investigation are discussed, followed by the formulation of conclusions and the presentation of practical implications.

2. Theoretical Development and Hypotheses

A substantial correlation exists between the qualities exhibited by the firm's CEO and its operational characteristics (Lin & Hu, 2007). In addition to its repercussions on corporate conduct, it is crucial to acknowledge that CEO traits also contribute to molding how firm performance is perceived. Furthermore, scholars have ascertained that the individual drive of CEOs can directly affect both their actions and, consequently, the firm's performance. Consequently, this paper undertakes a review and organization of recent scholarly literature concerning the attributes of two distinct types of CEOs, their motivations, behaviors, and subsequent impact on firm performance.

According to Schuster et al. (2020), shareholder-led firms exhibit less myopic behavior than professional-led firms, which means that they are less inclined to decrease research and development (R&D) spending to meet short-term profitability targets. Firms led by shareholder-CEOs generate a greater number of technological innovations, as evidenced by their stock market values (J. M. Lee et al., 2020). While R&D and innovation are more commonly associated with shareholder-CEOs, according to the findings of C. Lin et al. (2011), there exists a positive relationship between CEO education level and professional background, i.e. attributes associated with a professional CEO, and a firm's innovation efforts. Short-term R&D investments may potentially have a detrimental effect on a firm's profitability, but successful R&D efforts are typically associated with long-term competitive advantages and financial gains.

Beyond the impact on firm behavior, it is important to recognize that CEO characteristics also play a role in shaping the perception of firm performance and the value attributed to it by investors (external shareholders). Johnson and Yi (2013) contend that shareholder-CEOs possess unique qualifications that enable them to effectively manage their firms and increase firm value. Despite the potential presence of overconfidence among shareholder-CEOs, J. M. Lee et al. (2017) presented evidence indicating that investors are not aware of such bias among shareholders. Instead, investors tend to accept shareholder-CEOs' statements at face value, suggesting the absence of an entrepreneurial optimism discount in the stock market. According to Fattoum-Guedri et al. (2018), investors tend to overestimate the magnitude of costs that control enhancement mechanisms employed by shareholder-CEOs may create for their initial public offering (IPO) firms. However, as investors gain experience over time, they revise their perception of the initial penalty, leading to a positive adjustment in the stock price. In contrast, S.-Y. Lee and Ko (2022) found no significant positive correlation between the presence of shareholder-CEOs and the longer-term survival of foreign firms after their IPO. Although acquirers pay for the shareholder's social capital initially, they may not necessarily capture the value associated with it in the long run (Kumar et al., 2021). Furthermore, Wasserman (2017) discovered that firms in which the shareholder maintains authority over the board of directors and/or the CEO are significantly less valuable than those where the shareholder has relinquished control.

After establishing that CEO characteristics exert an evident influence on firm behavior and investor valuations, it becomes imperative to examine the predominant research orien-

tation in this field. A more comprehensive analysis of current scholarly literature reveals discernible patterns in empirical research pertaining to the examination of performance disparities between shareholder-CEOs and professional-CEOs (see Table 1).

Table 1. Recent scientific studies

Study	Scope	Measure(s)	Key Findings
Daily and Dalton (1992)	186 U.S. firms	Price/earnings ratio, return on assets (ROA), ROE	No significant differences in financial performance
Willard et al. (1992)	155 mostly high-tech USA manufacturing firms	Combination of financial indicators	No significant differences in financial performance
Bamford et al. (2006)	798 new U.S. banks	Average net interest margin	Negative impact of shareholder-CEO exit
He (2008)	1 143 U.S. IPO firms	ROA and firm survival status	Shareholder-CEO-led firms outperform professional-CEO-led firms
Fahlenbrach (2009)	2 270 U.S. IPO firms	Stock market returns	Higher returns by shareholder-CEO-led firms
Mousa et al. (2014)	123 high-tech U.S. IPO firms with less than 500 employees	IPO value	Greater shareholder-CEO involvement results in lower IPO values
Emestine and Setyaningrum (2019)	280 firms from 6 ASEAN countries	Tobin's Q	No differences in performance
M. A. Abebe and Tangpong (2018)	38 shareholder-CEO-led and 104 professional-CEO-led U.S. firms	Corporate turnaround success in declining firms	Better performance by shareholder-CEO-led firms
Saidu (2019)	36 firms listed on the Nigerian Stock Exchange	Market price of the equity, ROA, and ROE	CEO shareholding positively affects firm's stock performance
Kim and Kiymaz (2021)	214 publicly listed Indian firms	Tobin's Q	Shareholder-CEOs have lower firm value
Kumar et al. (2021)	157 shareholder-CEO-led and 786 professional-CEO-led U.S. firms from the S&P 1500 list	Stock market premium of corporate acquisitions, Tobin's Q	Premium for shareholder-CEO-led firms
Zaandam et al. (2021)	337 effect sizes derived from 117 primary studies	Institutional measures	Shareholder-CEOs demonstrate performance advantages

As illustrated in Table 1, the prevailing emphasis of scholarly investigations resides within the context of publicly listed firms and their performance in the stock market. Notably, the existing body of research has produced incongruous outcomes. Consequently, within the framework of this scholarly discourse, the subsequent hypothesis is proposed:

H1. *A statistically significant difference exists in the stock market performance between firms led by shareholder-CEOs and those managed by professional-CEOs.*

Scholars in the field have also acknowledged that the personal motivation of CEOs may exert a direct influence on both CEO behavior and subsequently firm performance. From the perspective of agency theorists, shareholder-CEOs are expected to exhibit superior degrees of personal identification, commitment, and employee trust in contrast to their professional-CEO counterparts. This is ascribed to the potency and safeguarding that ownership of shares confers upon the former, which empowers them to center their complete attention, capabilities, and resources on guiding their organizations (O'Connell & Ward, 2020). Conversely, professional-CEOs are dissociated from ownership in their firms and, consequently, act in their self-interest, unless incentivized by bonuses, options, or extended-term contracts to optimize the wealth of the organization or subjected to exhaustive monitoring (Panda & Leepsa, 2017). Hence, the appointment of a professional-CEO gives rise to agency costs, e.g., expenditures incurred in the monitoring of management actions to maintain alignment in the shareholder–agent relationship, corporate expenditures that deliver personal benefits to the CEO to the detriment of shareholders, and the expenses associated with missed opportunities due to divergent motivations and risk-taking preferences (Jensen & Meckling, 1976). According to Hoang et al. (2019) and many other researchers of agency relationships in firms, these costs should be regarded as any other costs and have the potential to adversely affect firm performance.

Building upon the assumptions of agency theorists, which suggest divergent motivations between the two types of CEOs within firms due to shareholder-CEOs holding stock in firms in addition to a managerial role and the presence of additional costs associated with agency relationships, the ensuing hypothesis is proposed:

H2. *A statistically significant difference exists in the shareholder return between firms led by shareholder-CEOs and those managed by professional-CEOs.*

The extant literature on CEO characteristics and firm performance offers valuable insights. Lin and Hu (2007) established a strong link between CEO attributes and operational features, underlining the role of CEO traits in shaping the perception of firm performance. Subsequent research by Schuster et al. (2020), J. M. Lee et al. (2020), C. Lin et al. (2011), and others highlights the impact of CEO type on innovation, R&D, and shareholder returns. Additionally, the influence of CEO motivation, characteristics, and qualifications, particularly in the context of shareholder-CEOs and professional-CEOs, has been extensively explored, shedding light on their distinct behaviors and effects on firm value (Johnson and Yi, 2013; J. M. Lee et al., 2017; Kumar et al., 2021; Wasserman, 2017; S.-Y. Lee and Ko, 2022). This body of research has primarily focused on publicly listed firms and their stock market performance, yielding mixed findings. Consequently, this study examines if a statistically significant difference exists in stock market performance or shareholder return between firms led by either shareholder-CEOs or professional-CEOs.

3. Research Methodology

Sample construction. The bulk of existing research examining disparities in performance between firms led by shareholder-CEOs and those governed by professional-CEOs has

primarily concentrated on the evaluation of publicly traded IPO firms (see Table 1). Therefore, in alignment with this common practice, the current study as well adopts an assessment of publicly traded firms.

Prior scholarly research in this realm has primarily concentrated on firms listed on the stock exchanges in the U.S., with only scant investigations pertaining to variances in financial performance conducted in Europe, Asia, or other economies. To extend the boundaries of research within this field to hitherto unexamined contexts, this study has chosen to focus on the Baltic countries of Estonia, Latvia, and Lithuania. Each of the countries in the sample is host to only a single stock exchange – Tallinn, Riga, and Vilnius stock exchanges, respectively. All three exchanges operate in an interconnected manner under the umbrella of the Nasdaq Baltic stock market.

Through the Main and Secondary lists, a total of 55 firms were listed on the Nasdaq Baltic on the last day of 2021 (see Table 2). Due to the constrained pool of publicly listed firms in the Baltics, it was imperative for this study to identify a timeframe for the empirical analysis that would yield ample amount of dependable data. Considering that since 2017 the composition of the stock exchange has been more stable, i.e. from 2017 to 2021 only nine firms were newly added to the stock exchange, while shares of 46 firms were traded throughout the whole period, respectively, these 5 years were selected for the analysis. The data sample for this study comprised the complete Nasdaq Baltic composition, encompassing all 55 firms that were listed on the exchanges as of the final day of 2021.

Continuing in the tradition of other similar research in the field, the firms within the sample were not grouped according to size and/or sector of the economy.

Independent variable. Consistent with the study's objective of assessing performance differences between firms led by shareholder-CEOs and professional-CEOs, the CEO type was selected as the independent variable, comprising two distinct categories: "shareholder-CEO" and "professional-CEO." A CEO was classified as a shareholder-CEO if he/she held ownership stakes in the firm during the research period. In the scholarly research concerning founder-CEOs, shareholder-CEOs, and/or family-CEOs, it is commonly observed that a precise amount of shares in the firm necessary for the classification of a CEO within these aforementioned categories remains undefined. Consequently, this study refrains from establishing a specific share threshold as a prerequisite for categorizing a CEO as a shareholder-CEO. In the context of this research, the possession of any amount of shares within the firm is sufficient for the CEO to be classified as a shareholder-CEO. CEOs who did not meet the criteria for a shareholder-CEO were categorized as professional-CEOs by default.

Dependent variables. Consistent with the study's objective of evaluating the financial performance of firms, distinct dependent variables were selected to test each hypothesis separately.

To examine whether there is a statistically significant difference in stock market performance between firms led by shareholder-CEOs and those managed by professional-CEOs (H1), Tobin's Q was chosen as a market-based measure, building on the approaches of Emestine and Setyaningrum (2019), Kim and Kiymaz (2021), Kumar et al. (2021), and

other researchers. Tobin's Q is a versatile metric with a solid theoretical foundation, commonly used by researchers for evaluating firm's financial performance. Significantly, in the context of this study, it is noteworthy that Tobin's Q can be used across industries and over time. Tobin's Q is calculated as the ratio of a firm's market value to its book value or replacement cost of assets (Chung & Pruitt, 1994). A lower Tobin's Q ratio, ranging from 0 to 1, suggests that the cost of replacing a firm's assets exceeds the value of its stock, indicating undervaluation. Conversely, a higher Q ratio (greater than 1) indicates that a firm's stock is priced higher than the replacement cost of its assets, implying overvaluation.

To examine whether there is a statistically significant difference in shareholder return between firms led by shareholder-CEOs and those managed by professional-CEOs (H2), the accounting-based measure ROE was employed. This selection is grounded in the rationale that ROE is a financial metric most used to evaluate a firm's profitability in relation to its shareholder equity. Shareholders, as the owners of the firm holding shares of its stock, have a vested interest in the financial performance and stand to benefit from any generated profits. Additionally, ROE is widely used in the scientific research because it provides comprehensive insights into a firm's financial performance and is a widely recognized proxy for firm profitability, enabling researchers to investigate various financial, managerial, and policy-related questions. Significantly, in the context of this study, it is noteworthy that ROE can be used across industries and over time. ROE is expressed as a percentage, with higher ROE values indicating better performance.

Data collection. Data collection for this study was conducted by the author during the third and fourth quarters of 2022. This timeframe allowed for the collection of data after all the firms in the sample had published their annual reports and audited financial statements for the year 2021.

CEO type. To ascertain the CEO type for each individual CEO in the sample, a thorough examination was conducted to determine whether they held stock in the firm directly and/or indirectly. No specific threshold regarding the minimum number of shares required for classification as a shareholder-CEO was established. A careful evaluation was carried out for each CEO until a confident determination could be made regarding their ownership of company stock and subsequent classification as a shareholder-CEO.

Multiple sources of information were utilized in the following order for determining the CEO type. Initially, the public list of the firm's main shareholders available on the Nasdaq Baltic website was consulted. However, it should be noted that Nasdaq Baltic rules mandate public disclosure of shareholders' information only when a shareholder holds a 5% or larger stake in the firm. Therefore, supplementary sources of information were employed. The annual reports of the firms served as a secondary source to verify whether the CEO also held shares in the company. In some cases, the official websites of the firms as well provided information on the CEO's share ownership. As a last resort, alternative public sources such as press articles and compilations of the wealthiest individuals in Estonia, Latvia, and Lithuania were consulted.

By utilizing these various sources, the CEO type of all 55 firms in the sample was determined (see Table 2).

Table 2. Sample size and characteristics

Country	Stock Exchange	No. of Firms			CEO Type			
		Main List	Secondary List	Total	Shareholder		Professional	
					Total	%	Total	%
Estonia	Nasdaq Tallin	18	2	20	15	75%	5	25%
Latvia	Nasdaq Riga	4	7	11	7	64%	4	36%
Lithuania	Nasdaq Vilnius	13	11	24	12	50%	12	50%
Total		35	20	55	34	62%	21	38%

Tobin's Q. The financial data necessary for calculating Tobin's Q was collected through secondary data sources, specifically the official firm profiles (firm fact sheets) accessible on the Nasdaq Baltic website and/or audited official firm financial reports. Tobin's Q was computed using the following formula:

$$Tobin's\ Q = \frac{Equity\ Market\ Value}{Equity\ Book\ Value}$$

The equity market values and equity book values, measured in millions of Euros, were obtained for each firm in the sample separately as of the final day of each financial year spanning from 2017 to 2021. For the empirical analysis, the 5-year average Tobin's Q was utilized.

ROE. The ROE values, measured in percentages, were obtained for each firm in the sample separately as of the final day of each financial year spanning from 2017 to 2021. For the empirical analysis, the 5-year average ROE was utilized.

Data reliability and validity. The reliability and validity of the data sources used in this study are vital for ensuring the robustness of the research findings. The selection of data sources was based on their relevance to the research objectives and their availability for the sample firms.

The financial data used in this study for calculating Tobin's Q and ROE values was obtained from reliable primary sources: the Nasdaq Baltic website and firms' audited financial reports. These sources undergo rigorous scrutiny from auditors, regulators, and investors, ensuring their reliability and validity. The Nasdaq Baltic website provides official firm profiles and regularly updated financial information, adhering to strict reporting standards. Additionally, the audited financial reports prepared by independent auditors provide further assurance of the data's accuracy and completeness.

The data for determining the CEO type was sourced from reliable primary sources such as the Nasdaq Baltic website, firms' annual reports, and official websites, which provide direct and credible information regarding CEO shareholding. Only in very rare cases, alternative public sources such as press articles and compilations of wealthy individuals in the region were consulted to cross-reference and validate the information. Though only those press articles and/or compilations of wealthy individuals that were based on the data of official registers of firm shareholders in respective countries were used, the

possibility of erroneous information cannot be fully eliminated, since it was not possible to cross-check the information with the primary shareholder data in the official registers.

This study deliberately abstained from quantifying the CEO's shareholding within the firm. It remains a possibility that the extent of shares held by the CEO in the firm may exert an influence on their behavior and decision-making, and, accordingly, firm financial performance. However, same omission was observed in the examination of other scientific studies in the field during the literature analysis for this research. Consequently, it is reasonable to assert that the outcomes of this study are comparably aligned with those of similar investigations in the field.

Statistical tool. This research aims to compare the means of a numerical outcome variable (ROE, Tobin's Q) between two types of CEOs. Accordingly, the choice of a statistical tool was determined by the nature of the independent variable, which is "CEO type." This variable is categorical, meaning it falls into two distinct and nonoverlapping categories: "shareholder-CEO" or "professional-CEO." In this case, an independent samples t-test was selected as a statistical method since it is used in research to compare the means of two independent groups to determine if there is a significant difference between them in terms of a numerical outcome variable.

To validate the robustness of the findings of the independent-samples t-test, a bootstrap resampling procedure was employed with 5 000 iterations.

4. Results

Over the 5-year period from 2017 to 2021, the mean Tobin's Q of the sample consisting of 46 Nasdaq Baltic firms was calculated to be 1.25. Notably, firms led by professional-CEOs (N = 19, M = 1.3679) demonstrated superior performance compared to those led by shareholder-CEOs (N = 27, M = 1.1689). Additionally, the mean ROE for the entire sample of 55 firms during the same period was found to be 4.14%. The accounting-based approach revealed that shareholder-CEO-led firms (N = 34, M = 7.76%) outperformed their professional-CEO-led counterparts (N = 21, M = -1.74%). For full group statistics, see Table 3.

Table 3. Group statistics of the sample

Measure	CEO Type	N	Mean	St. Deviation	Median	Minimum	Maximum
Tobin's Q	Shareholder	27	1.1689	.50698	1.1100	.1300	2.6900
	Professional	19	1.3679	.65084	1.2500	.3800	2.7200
	Total	46	1.2511	.57250	1.2050	.1300	2.7200
ROE	Shareholder	34	.0776	.16112	.0906	-.4147	.6178
	Professional	21	-.0174	.36831	.0592	-1.5194	.2663
	Total	55	.0414	.26129	.0824	-1.5194	.6178

An independent-samples t-test was performed to ascertain the presence of a significant disparity in the financial performance of Nasdaq Baltic listed firms, contingent upon whether they were managed by either shareholder- or professional-CEOs (see Table 4).

Table 4. Findings of independent samples t-test

Measure	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Tobin's Q	1.597	.213	-1.165	44	.250	-.19901	.17076	-.54314	.14513
ROE	2.205	.143	1.319	53	.193	.09498	.07203	-.04949	.23945

H1. The outcomes of the independent-samples t-test for the market-based metric Tobin's Q did not demonstrate a significant disparity in stock market performance between firms led by shareholder-CEOs (M = 1.1689, SD = .50698) and professional-CEOs (M = 1.3679, SD = .16112), [t(44) = -1.165, p = .250 > .05]. The 95% confidence interval for the mean difference ranged from -0.54314 to 0.14513, indicating no substantial distinction between the means within the sample. Levene's test for equality of variances revealed a nonsignificant result (F(2, 44) = 1.597, p = .213 > .05), as well suggesting no significant difference in variances between the groups. To validate the robustness of this result, a bootstrap resampling procedure was employed with 5 000 iterations. The bootstrap analysis reinforced the original t-test findings, as the bootstrap p-value of 0.278 suggested that the observed difference in means is statistically insignificant. Hence, the null hypothesis cannot be rejected.

H2. The outcomes of the independent-samples t-test for the accounting-based measure ROE did not demonstrate a significant disparity in shareholder return between firms led by shareholder-CEOs (M = .0776, SD = .16112) and professional-CEOs (M = -.0174, SD = .36831), [t(53) = 1.319, p = .193 > .05]. The 95% confidence interval for the mean difference ranged from -0.04949 to 0.23945, indicating no substantial distinction between the means within the sample. Levene's test for equality of variances revealed a nonsignificant result (F(2, 53) = 2.205, p = .143 > .05), as well suggesting no significant difference in variances between the groups. To validate the robustness of this result, a bootstrap resampling procedure was employed with 5 000 iterations. The bootstrap analysis reinforced the original t-test findings, as the bootstrap p-value of 0.320 suggested that the observed difference in means is statistically insignificant. Hence, the null hypothesis cannot be rejected.

To further corroborate the findings from t-test, effect sizes for independent samples were computed as well (see Table 5). Values of Cohen's d and Hedges' g below 0.5 indicate that the disparities in the market-based measure Tobin's Q and the accounting-based measure ROE between firms led by either type of CEO within the sample are negligible.

Table 5. Effect sizes for independent samples

Measure	Measurement	Standardizer	Point Estimate	95% Confidence Interval of the Difference	
				Lower	Upper
Tobin's Q	Cohen's d	.57024	-.349	-.938	.244
	Hedges' g	.58019	-.343	-.922	.240
ROE	Cohen's d	.25953	.366	-.184	.913
	Hedges' g	.26327	.361	-.181	.900

5. Discussion

The results of this study imply that, on a mean basis, professional-CEO-led firms exhibited superior stock market performance, as indicated by Tobin's Q (M = 1.37), compared to firms led by shareholder-CEOs (M = 1.17). These results align with the findings reported by Kim and Kiymaz (2021) while contrasting with the evidence by M. A. Abebe and Tangpong (2018), Saidu (2019), and Kumar et al. (2021). However, when considering effect sizes for independent samples, it becomes evident that the variations in Tobin's Q are of negligible magnitude. This assessment aligns with the results derived from the independent samples t-test, which indicate that the differences in stock market performance between firms managed by CEOs of distinct types do not attain statistical significance. These findings serve to corroborate the earlier research by Ernestine and Setyaningrum (2019), while contrasting with the discoveries by Adams et al. (2009), Cai et al. (2012), Abebe and Anthony Alvarado (2013), Johnson and Yi (2013), Kim and Kiymaz (2021), and others. Notably, in the research of other scholars in the field, a discernible pattern of markedly superior financial market performance among firms helmed by shareholder-CEOs has predominantly surfaced in the context of the U.S. listed firms. The U.S. is characterized by practice of compensating CEOs in their firms through stock options, thereby fostering a convergence of interests between the CEO and the shareholders.

Contrary to the findings reported by Lauterbach and Vaninsky (1999), this study observed that shareholder-CEO-led firms displayed higher average ROE (M = 7.76%) compared to professional-CEO-led firms (M = -1.74%). This observation aligns with the theoretical perspective of agency theorists, who argue that shareholder-CEOs, as equity owners in their respective firms, exhibit greater interest in generating shareholder returns, while professional-CEOs are associated with agency costs that should be treated as any other costs and thus negatively impact firm profitability. Nevertheless, upon closer examination of the effect sizes for independent samples, it becomes apparent that the differences in ROE are negligible. Furthermore, the results of the independents samples t-test demonstrate that the disparities in ROE between the two distinct categories of firms, each led by CEOs of different type, as identified within the scope of this study, fail to attain statistical significance. With this discovery the study supports previous findings by Daily and Dalton (1992), while contrasting with the observations by Le Duc Hoang et al. (2019) and Saidu

(2019). The empirical findings derived from the independent samples t-test analysis lend substantial empirical support to the fundamental principles of stewardship theory, asserting that CEOs, regardless of their type, function as stewards of their respective firms and, as such, are inclined to act in the best interests of shareholders and their firms.

I believe that several overarching factors could, at least partially, account for the findings of this study.

First, it could be argued that the performance of the firms in the sample is affected, and in turn impact of a CEO is diminished, by implementing governance measures. Corporate governance regulations for firms that are listed on the Riga Stock, Tallinn Stock Exchange, and Vilnius Stock Exchange state that at least one collegial body, namely, the supervisory board or the management board, must be formed in a public limited liability firm. Complying with the regulations, all 55 firms in the research sample had at least one collegial body.

According to He (2008), the relationship between a CEO and a firm's financial performance is influenced by the corporate governance structure. Additionally, Bamford et al. (2006) argue that as firms grow, the influence of CEOs diminishes. Naimah (2017) emphasizes the significance of effective corporate governance in enhancing overall firm performance and maximizing long-term shareholder value. The relationship between governance and firm performance is supported by scholars such as S. Lin and Hu (2007) and Malik and Makhdoom (2016).

While the board assumes responsibility for strategic and financial decisions (Ferreira & Kirchmaier, 2012), CEOs in Estonia, Latvia, and Lithuania operate within the constraints of the corporate laws in the specific country and/or regulations set forth in the firm by-laws. As a customary practice, legal and regulatory frameworks typically mandate the requisite approval from the board of directors and/or shareholders for substantial corporate determinations, encompassing investments, acquisitions, profit distributions, and other strategic actions that directly exert influence on the financial performance of the firm.

Second, firm size and maturity must as well be considered when explaining the findings of this study. According to Hasan and Habib (2017), different life cycle stages of firms are associated with differing levels of resources and challenges. Watson (1995) finds that in small firms, tasks are typically carried out by an individual or a small group, while Jain and Tabak (2008) add that within an entrepreneurial context, firms heavily depend on the shareholder's vision firm influence, positive image/social capital, and firm-specific skills.

Conversely, the requirements, encounters, and conditions of mature firms are substantially distinct from those observed in nascent firms (Zaandam et al., 2021). As entrepreneurial firms mature and their management becomes more professionalized, spontaneous actions are substituted with established protocols and systems, while managerial, strategic, and reporting frameworks are established, along with an augmentation of the firm's human and social capital (Zahra & Filatotchev, 2004). With the maturing of a firm, management team is expanded to include other experienced professionals, which, based on the thinking of upper echelons theory, means that firm performance is as well influenced by the values and beliefs of other managers in addition to a CEO (Chen et al., 2018). As a result, the

influence of a single person – the CEO – on the firm's performance is diminished as the firm grows and matures.

Third, it must be considered that the transition to a market economy and the establishment of private firms in the Baltic countries is a relatively recent phenomenon. Following the regaining of independence in the early 1990s, Estonia, Latvia, and Lithuania underwent significant reforms to reshape their economies, which were previously influenced by the Soviet Union's centrally planned economic system and the absence of capitalism, including private firms. While these Baltic countries have made remarkable strides in economic transformation since independence, with particular emphasis on fostering private firms (Lainela, 2000; Staehr, 2017), the relatively short timeframe of three decades may not have allowed for significant divergences in the characteristics of shareholder-CEOs and professional-CEOs to emerge as observed in mature market economies like, for example, the U.S. Consequently, firms led by either type of CEO may exhibit similar behavior, potentially resulting in insignificant disparities in financial performance.

Notwithstanding the existence of corporate governance practices, processes, and procedures that outline the operations of mature publicly traded firms, the CEO remains accountable for executing strategic decisions, recruiting top management, representing the firm publicly, and undertaking various other responsibilities. Therefore, despite the inconsistent findings of other researchers in the field and the specific outcomes of this study regarding performance disparities between firms managed by either type of CEO, it is my contention that CEO characteristics still influence firm performance. Given that shareholder-CEOs and professional-CEOs possess distinct attributes and capabilities, I propose that, based on these characteristics, comparable performance outcomes can be achieved through contrasting approaches employed by the two types of CEOs.

Conclusions

A fundamental motivation behind this study was to contribute to the knowledge in the field regarding performance disparities between firms governed by either type of CEO. *First,* it aimed to examine the impact of CEO characteristics on firm behavior and subsequently firm performance, drawing upon existing scientific literature. *Second,* it sought to contribute to the existing body of knowledge by investigating if the financial performance differences between firms led by shareholder-CEOs and those led by professional-CEOs exist in a previously unexplored context.

To achieve these objectives, a comprehensive review of past scholarly research on CEO characteristics and firm behavior as well as an empirical examination of the financial performance of 55 publicly listed firms from the Nasdaq Baltic market in Estonia, Latvia, and Lithuania was undertaken. The Baltic nations offered a unique research setting due to the relatively recent establishment of most private sector firms in the region, occurring within the past three decades following the dissolution of the Soviet Union.

In the research sample, most of the firms, accounting for 62%, were led by shareholder-CEOs, while the remaining 38% were headed by professional-CEOs. To evaluate the

stock market performance of the firms, Tobin's Q, a market-based metric, was employed, while shareholder return was assessed using the accounting-based metric ROE. The financial data utilized in the study was sourced from official firm profiles accessible on the Nasdaq Baltic website, as well as official firm reports, covering a period of 5 years from 2017 to 2021.

Based on the empirical findings of this study, the research evidence indicates that there are no statistically significant disparities in the financial performance between publicly traded firms led by shareholder-CEOs and those led by professional-CEOs in the Baltic region. These results suggest that the specific role of individuals, regardless of whether they are shareholder-CEOs or professional-CEOs, does not exhibit a discernible impact on the financial outcomes of publicly listed firms in the Baltic context.

The study's findings provide practical implications for management professionals, shareholders, board members, and CEOs. This research offers valuable insights to shareholder-CEOs of mature firms who view their firm as a lifelong achievement or are approaching retirement. It posits that the appointment of a professional-CEO, particularly within publicly listed firms, is improbable to have a detrimental impact on the firm's financial performance, contingent upon the effective implementation of sound corporate governance practices and the establishment of a robust top management team. These findings hold the potential to provide valuable insights for board of directors deliberations pertaining to the transition from a shareholder-CEO to a professional-CEO. Consequently, it is imperative for boards of publicly listed firms to extend their efforts beyond CEO engagement and place due emphasis on fostering the overall development of the top management team, including the cultivation of internal professional managers who may assume CEO roles in the firm in the future. However, it is crucial to acknowledge the distinct characteristics of the two types of CEOs and carefully consider them during succession planning. Firms vary in their operational processes, managerial capabilities, and exposure to market forces, necessitating tailored succession decisions that align with the unique needs and circumstances of each firm.

Through the observation of statistically nonsignificant differences in financial performance between firms led by shareholder-CEOs and professional-CEOs, the present study makes noteworthy contributions to multiple management theories. These findings challenge the propositions of the organizational life cycle theory, which suggests that shareholder-CEOs should be succeeded by professional-CEOs as firms grow and mature, as well as the underlying premise of agency theory, which posits that agency costs linked to professional management should detrimentally affect shareholder returns. Instead, the study aligns with the principles of stewardship theory, asserting that CEOs of any type should act in the best interests of the firm and its shareholders. Moreover, it lends support to the propositions of the upper echelons theory, indicating that in mature firms, financial performance may not be strongly dependent solely on the CEO's actions.

Despite the conclusive findings of the empirical research, it is imperative to acknowledge certain limitations that necessitate careful consideration when interpreting the findings of this research. *Firstly,* the study's generalizability is limited by the small

number of listed firms (55) on the Nasdaq Baltic market, which restricts the ability to draw broad conclusions about all mature firms in the Baltic region. *Secondly,* industry-specific factors were not considered in the evaluation of firms, overlooking potential variations in economic behavior and competition levels across different industries. *Additionally,* the study did not account for size-related effects, which can significantly influence the role of shareholders and may yield different results for small-scale or new ventures, e.g., startups. *Finally,* the research focused primarily on financial performance using metrics such as Tobin's Q and ROE, and did not include other important financial indicators or nonfinancial performance measures.

Limitations of this study provide direction for future research in the field. *Firstly,* given the absence of substantial distinctions between listed firms and other mature firms within the Baltic countries, the research's breadth could be markedly extended by encompassing privately held firms in the investigative framework. *Secondly,* an even broader research scope could be achieved by incorporating other ex-Soviet countries that share a similar contextual backdrop to the Baltic states into the sample, thereby enhancing the research's regional applicability and generalizability. *Additionally,* the expansion of the research scope to encompass privately held firms within the region would facilitate the conduct of intra-industry analyses, thereby mitigating potential biases associated with industry-specific factors. *Finally,* criteria of nonfinancial firm performance, like corporate social responsibility, mergers & acquisitions, investment decisions, and risk-taking behaviors, could provide further insights in future studies. Financial performance of firms might also be evaluated further by including additional measures such as ROA, price-to-earnings ratio, and/or dividend yield.

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