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CEO values and corporate performance: A text mining and LLM-based approach

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Abstract

This study explores the relationship between CEO values and corporate performance across five standard dimensions of companies' activity: liquidity, profitability, solvency, operating efficiency, and valuation. Utilising two complementary approaches—dictionary-based text mining and a ChatGPT-based approach to analyse over 4300 CEO interviews, we identified the CEO Schwartz value profiles and compared them with corporate outcomes. The findings indicate that that CEOs with a stronger emphasis on the Achievement value tend to be associated with higher corporate profitability. In turn, CEOs with a strong orientation toward Security are associated with higher corporate liquidity and long-term value creation. In addition, CEOs emphasising Self-direction or Stimulation are observed in firms with higher cash reserves and relatively lower operating efficiency. The results suggest that CEOs' values may lead to different strategies and, as a consequence, differences in companies' financial results. The findings contribute to a better understanding of the sources of these differences.

Keywords

- CEO
- personal values
- corporate performance
- text mining
- ChatGPT

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Introduction

Extensive academic research has examined the role of chief executive officers (CEOs), revealing their substantial impact on specific firm-level policies or outcomes (see Osei Bonsu et al., 2024 for a review). This influence concerns investments (Hu & Liu, 2015), companies' financial policies (Custódio and Metzger, 2014; Naeem & Khuram, 2020), corporate risk-taking (Bernile et al., 2017), leverage (Faccio et al., 2016), cash holdings (Chen et al., 2020), firm value (Wang & Fung, 2022) or ESG performance (Nguyen et al., 2024), among others. However, each CEO embodies a distinctive individuality represented by their personal traits, the combination of which may be important for company success and the benefits of the stakeholders. Bromiley and Rau (2016) classify these traits into three groups: observable attributes (e.g., age, gender, origin, education, work experience), personality and other underlying characteristics (e.g., charisma, values, hubris, intelligence), or interactions with others (e.g., social ties). Given that the executives' strategic choices may be inherently driven by internal stimulation and their intrinsic value systems (Carpenter et al., 2004; Hoffmann & Meusburger, 2018; Kotey & Meredith, 1997), this study addresses the specific thus far empirically underexplored nexus between CEO human values and corporate performance. It seeks to deepen understanding of how CEO value profiles may relate to companies' financial results across the following dimensions: liquidity, profitability, solvency, operating efficiency and valuation.

To analyse the impact of the CEO's personal values on corporate performance, we draw upon the Upper Echelons Theory (Hambrick & Mason, 1984) and, going beyond the related finance literature, embrace the widely acknowledged Schwartz's Theory of Basic Human Values from psychology (Schwartz, 1992, 2012). This interdisciplinary approach allows us to explore the fundamental, non-observable motivational drivers of executive decision-making,

while broadening the practical applicability of Schwartz's framework to strategic management and finance. The Schwartz value system conceptualises values as desirable, trans-situational goals that function as guiding principles in the lives of individuals, and exhibits a notable degree of robustness across various cultures (Bilsky et al., 2011; Schwartz, 1992, 2005). Specifically, it delineates ten fundamental and interrelated values: Benevolence, Universalism, Tradition, Conformity, Security, Power, Achievement, Hedonism, Stimulation, and Self-direction, converging to form a motivational circular continuum (see Appendix A), which can further be aggregated into broader bipolar dimensions (conservation vs. openness to change and self-transcendence vs. self-enhancement) or polar dimensions (personal vs. social focus). Unlike other personality characteristics, these values uniquely reflect what an individual truly believes to be appropriate behaviour. Therefore, they reveal personal motivations (Kraatz et al., 2020) and provide deeper insights into the fundamental drivers underlying CEO's observed behaviours and decisions. For example, CEOs prioritising openness to change have been found to exhibit a positive correlation with engaging in more risk-seeking activities (Roccas et al., 2002). Relatedly, Berson et al. (2008) demonstrate positive associations between CEO's Self-direction values (indicative of a culture of innovation) and sales growth, Security values (associated with a bureaucratic culture) and organizational efficiency, as well as between Benevolence (emblematic of a supportive culture) and employee satisfaction. Simultaneously, the relationship between Benevolence and sales growth exhibits negatively correlated patterns. Drawing from their study on small-business owners, Gorgievski et al. (2011) suggest that 'softer' success criteria, such as stakeholder satisfaction and a good work-life balance, are predominantly influenced by self-transcendent value orientations like Benevolence and Universalism. In contrast, owners oriented towards Power and Achievement tend to emphasise 'hard' success criteria, including business growth, innovation, profitability, and longevity. More broadly, Banning et al. (2023) demonstrate how employees' value-driven decisions influence others through their perception of social norms that shape corporate culture, highlighting the distribution of personal values as a key factor in determining corporate performance. The present study adds to this body of knowledge and provides further insights into the upper echelons' black box, revealing direct links between CEO value orientations and fundamental indicators of corporate performance. While adopting a perspective that foregrounds the role of individual-level factors, it does not claim that CEO values unilaterally determine company outcomes, but rather positions them as complementary to other potential (e.g., structural or regulatory) factors, thereby contributing to a more holistic understanding of corporate performance drivers.

Given the multidimensionality of Schwartz's value framework, we narrow our primary focus to the values of Achievement and Security. These values are particularly pertinent in corporate management, as they govern the dynam-

ics between two contrasting goals—greater performance or greater stability, respectively. This perspective aligns with the long-standing debate over the firm's objective function, a foundational question in corporate finance and governance (Berle, 1932; Jensen, 2001). While both Achievement and Security are the focal values of this study, other relevant values, including Conformity, Universalism, Self-direction, Stimulation and Power, were also included in the empirical models to shed light on broader patterns in the interplay between financial outcomes and CEO value orientations. However, given their more complex links to financial indicators compared to the clear performance–stability dichotomy represented by Achievement and Security, their expected effects prove less straightforward to hypothesise explicitly.

By definition, Achievement involves a focus on personal success through demonstrating competence according to social standards (Schwartz, 2012). Hoffmann and Meusburger (2018) highlight that CEOs guided by Self-enhancement and Achievement values tend to feel a strong personal responsibility for their organisation's success. Similarly, Adams et al. (2011) found that CEOs who prioritise Achievement, along with the Power value, tend to promote shareholder wealth maximisation and pro-shareholder policies rather than the interests of other stakeholders. This is primarily evidenced by the maximisation of profits and share prices, both of which serve as prominent indicators of successful performance (Damodaran, 2014; Jensen, 2001). In corporate practice, performance measures encompass a broad array of financial and non-financial indicators (Kaplan & Norton, 1992; Koller et al., 2025; Parmenter, 2015; Wahlen et al., 2011). Among the finance-related domains, profitability remains a widely recognised fundamental driver of effective management (Damodaran, 2020; Robinson et al., 2012). Building on these insights, we hypothesise that:

H1: A stronger CEO emphasis on the Achievement value is positively associated with corporate profitability.

In turn, Security, as a prosocial value type, is typically associated with safety, harmony, and the stability of society, of relationships, and of the self (Schwartz 2012). Therefore, CEOs prioritising such value orientation are likely to favour firms' long-term financial stability, particularly in the liquidity dimension, but potentially at the expense of higher profitability. This conjecture corresponds to the findings of Chen et al. (2015), who revealed a negative relationship between individualism and corporate cash holdings. It is also supported by the evidence from Liu et al. (2013), who found positive links between individualism and corporate risk-taking that may translate into increased cash flow fluctuations. More broadly, companies that place greater emphasis on liquidity tend to experience stronger financial stability, lower bankruptcy risk, and enhanced investor confidence (Ndruru, 2025). Based on this reasoning, we additionally postulate that:

H2: A stronger CEO emphasis on the Security value is positively associated with corporate liquidity.

Although both hypotheses seem intuitive, their empirical verification poses challenges due to the difficulties in acquiring psychographic data from CEOs.[4] In practice, alternative approaches, including surveys (Gröber et al., 2023), experiments (Sagiv et al., 2011) or textual analysis (Fischer et al., 2022; Greiner et al., 2023; Ponizovskiy et al., 2020), are applied to identify the CEO value profiles. Notably, the ample corpus of publicly available CEO comments or speeches, coupled with recent advancements in text processing techniques and generative AI-powered tools creates new opportunities in this field. This study contributes to this emerging research trend by utilising the extensive content of CEO interviews to automatically identify CEO personal values, employing two complementary approaches to textual analysis: a dictionary-based method that emphasises rule-based, interpretable value categorisation (labelled as the TM-approach), and a content analysis method powered by the Large Language Model ChatGPT-4o mini (OpenAI, 2024a) to capture nuanced, context-aware insights (labelled as the LLM-approach). The combined use of both methods enables methodological triangulation, offering a more robust framework for assessing personal values from publicly available textual content. Their comparison provides complementary insights into different facets of CEO value expression.

The remainder of the paper is organised as follows: Section 1 provides a description of the dataset and methodology; Section 2 expounds upon the results and analysis; the final section sets out our conclusions.

1. Data and research methodology

1.1. Data collection and processing

To investigate the relation between CEOs' values and the diverse dimensions of corporate performance, we integrated two databases: (1) The Wall Street Transcripts, which provides CEO interviews, and (2) Capital IQ, which

[4] Recurrent and well-known: the World Values Survey (https://www.worldvaluessurvey.org) or European Social Survey (https://www.europeansocialsurvey.org) encompass relatively confined country-level subsamples of CEOs, typically concealed within occupation-related grouping classes, such as "Higher Administrative" (e.g., bankers, executives in large businesses, high government officials, union officials) in WVS (Haerpfer et al., 2022) or "Managing directors and chief executives" in ESS (ESS, 2024).

offers financial data. Combining these databases results in a sample of over 4300 observations spanning the years 1997 to 2022.

The text database used to infer CEO value profiles consists of CEO interviews published on The Wall Street Transcripts (TWST) website.[5] Unique CEOs and companies account for 21% and 48% of the total number of observations in the dataset, respectively. Despite the extensive time range of the data and the lack of a formal structure in the interviews, the style of these interviews has remained remarkably similar over the years. This allows for a consistent analysis of the value profiles reflected in CEOs' speeches.

The selected TM and LLM approaches required the textual data to be processed differently. For dictionary value extraction, the textual content underwent standard automated pre-processing steps using text mining tools, including punctuation removal, conversion to lowercase, and tokenization. In both methods, only the answers given by the CEOs were analysed. Subsequently, the value dictionary developed by Ponizovskiy et al. (2020) was applied to identify the value words present in each interview. Using these value words, we calculated the frequencies of terms related to each specific value type, thus establishing the CEOs' value profiles. Table 1 presents the value profile of the sample CEO, based on an interview containing 2142 words, of which 263 are value-related terms.

Although this dictionary method is validated and transparent, it cannot account for the particular setting of executive interviews. In contrast to most people, CEOs are media-trained and may communicate strategically, avoiding negatively coded words or emphasising certain buzzwords that signal positivity. A dictionary-based count will interpret repetitive buzzwords as high engagement with specific values, thus skewing the analysis.

To counteract the limitations of the dictionary-based approach, we used the generative LLM ChatGPT-4o mini (OpenAI, 2024b) with a tailored prompting strategy to also derive scores across all value dimensions. The model was guided to perform an analysis analogous to the Portrait Value Questionnaire (PVQ-21), but distilling human value-related insights from the interview data rather than responses to a formal questionnaire. We primed the model to consider in its answer that the input text is primarily concerned with the business environment and that the terminology used and the topics discussed may be biased accordingly. The exact prompt used is laid out in Appendix B. Beyond the codebook and some instructions regarding the desired output format, we did not provide the model with any labelled input-output exam-

[5] The Wall Street Transcript (TWST) provides access to CEO interviews upon registration at https://www.twst.com. In addition to CEOs, TWST also interviews financial analysts and company executives below the CEO level. To ensure comparability, all non-CEO interviews were excluded from the analysis. The interview database was accessed via subscription between October 9, 2023, and January 9, 2024.

Table 1. Value profile of the sample CEO

Value type	Unique value words in the sample interview	Total number of occurrences	Value frequency
Security	attention, dangerous, defence, defensive, guarantee, order, preserving, privacy, safer, safety, save, secure, security, threat, threatening, violence	25	0.0951
Conformity	certainty, code, integrity, law, orders, procedure, required, served, standards, system, trust	27	0.1027
Tradition	traditionally	1	0.0038
Benevolence	concern, dependable, feeling, friends, help, need, relationship, reliable	20	0.0760
Universalism	address, balance, communities, company, culture, meaning, protect, protecting, social, society, united	24	0.0913
Self-direction	ability, act, activity, controversy, create, creates, decision, freedom, goal, idea, intelligence, learn, resolve, science, special, think, thought	36	0.1369
Stimulation	attempted, challenges, dramatically, drive, exciting, interesting, newer, opportunities, opportunity, uncertainty, unique	29	0.1103
Hedonism	fulfilment, rest	3	0.0114
Achievement	advantage, approval, best, biggest, brains, business, capabilities, competing, competitive, effective, efficiency, growth, improvement, improving, job, progress, recognize, successfully, top, training, work	64	0.2433
Power	agency, aggressive, capital, cash, dealing, economics, enforcement, expensive, fight, force, management, might, profitable, revenue, strong	34	0.1293

Note: The following information is contained in the succeeding columns: (1) Value type: one of the ten Schwartz values; (2) Unique value words in the sample interview: a list of distinct words used by the CEO that correspond to each Schwartz value, based on the reference value dictionary; while these words may appear multiple times in the interview, each is listed only once; originally, all terms were in the American English form; (3) Total number of occurrences: the total number of value-related words (including repetitions) used by the CEO across the specific value types in the interview; (4) Value frequency: the proportion of words associated with a given value type (including repeated occurrences) relative to the total number of value-related words used in the interview.

Source: own elaboration.

ples. This strategy is known as zero-shot prompting (Kojima et al., 2022). It is a form of in-context learning, which does not require adapting model weights through fine-tuning nor supplying any examples of the task during

prompting. For each interview, the model was only supplied with the interview date, the CEO's name, and the company ticker in addition to the interview answers, providing context to the CEO's answers. This practice allowed the LLM to incorporate dynamic and contextual information acquired during pre-training that a static dictionary cannot capture. Such contextual information also includes potential changes in business-related language over a 25-year sampling period. It also enabled the model to rely on firm-, CEO- and industry-specific information it may have acquired through its training data. For our final inference, we set the temperature hyperparameter of the model to 0, which approximates a deterministic model output. For a subset of interviews, we also tested higher temperature settings informally, averaging the values attained through three model runs for each interview. For our task, the variation between runs proved negligible, making a deterministic setup optimal. Appendix C provides sample model outputs for selected input texts, illustrating how the LLM inferred value profiles from the interview responses.

As a result, each CEO was characterised by their own value system, comprising the values of Security, Conformity, Tradition, Benevolence, Universalism, Self-direction, Stimulation, Hedonism and Achievement, by two independent methodologies. To mitigate multicollinearity issues, three values, namely Hedonism, Tradition and Benevolence, were omitted from further analysis, which is a standard procedure in value-related studies.

Next, we integrated the interview data with financial metrics sourced from Capital IQ. These metrics are commonly used in financial analysis and cover the major dimensions of corporate finance: liquidity, profitability, solvency, operating efficiency, and valuation (Robinson et al., 2012). Specifically, we examined cash to total assets for liquidity, return on equity for profitability, total debt to total assets for solvency, sales to average total assets for operating efficiency, and the market value of equity plus the book value of debt relative to total assets as a proxy for the Q-ratio for the valuation dimension. These measures are succinctly labelled as Cash, ROE, Debt, Operating efficiency, and Q-ratio, respectively, throughout the text. Initially, potential outliers were identified using the Rosner test and replaced with values corresponding to the 1st or 99th percentile.

Descriptive statistics for the variables utilised in this study are presented in Appendix D. Among the TM- and LLM-based value dimensions, Achievement and Self-direction show the highest average intensities, which is consistent with the business-oriented context of the interviews. Notably, financial variables such as ROE, Debt, and the Q-ratio display substantial variability, indicating that the dataset captures both instances of severe financial distress and unusually high, though less extreme, cases of firm outperformance. This broad dispersion likely reflects the fact that the observation period of more than 25 years spans both episodes of economic turmoil and phases of prosperity.

1.2. Empirical specification

To examine the relationship between CEO values and corporate performance, we utilised Linear Mixed-Effects Regressions (Bates, 2015), treating each performance indicator as a dependent variable. While ideally, individual CEO fixed effects would be employed to perfectly control for unobserved time-invariant CEO characteristics and leadership changes, our dataset, due to the limited number of observations for an individual CEO or company, did not permit the inclusion of such granular CEO-specific fixed effects in a continuous panel data sense. Instead, we adopted a random-effects structure, grouping observations by the combination of the industry sector (initial digit of the SIC code) and year, which captures unobserved heterogeneity at the industry-year level. This approach was incorporated within the mixed-effects model framework, as there was no evidence of correlation between the random effects and other explanatory variables (Wooldridge, 2010).

Our primary model specification for a given firm observation *i* is as follows:

$$PM_i = \beta_0 + \sum_{k=1}^{7} \beta_k \cdot V_{ik} + u_{st} + \varepsilon_i \quad (1)$$

where: PM_i represents one of the five performance measures (ROE, Cash, Debt, Operating efficiency, Q-ratio) for observation i; β_0 is the fixed intercept; $\sum_{k=1}^{7} \beta_k \cdot V_{ik}$ represents the sum of the coefficients β_k for each of the CEO's personal value scores V_{ik}, derived from either the TM- or LLM-approach, where k indexes the seven Schwartz values included in the analysis: Security, Conformity, Universalism, Self-direction, Stimulation, Achievement, and Power; u_{st} represents the random intercept for the specific industry-year group defined by the combination of industry sector s (initial digit of the SIC code) and year t for observation i; ε_i is the idiosyncratic error term for observation i, assumed to be normally distributed with a mean of zero and a variance σ^2.

For a robustness check, we also estimated alternative simple linear regression models, in which the financial metrics were first normalised by their respective annual industry averages before being used as dependent variables. This additional step aimed to enhance the reliability of the analysis by ensuring that potential industry-specific variations were appropriately accounted for in the modelling process. The general specification for these robustness models is as follows:

$$NPM_i = \gamma_0 + \sum_{k=1}^{7} \gamma_k \cdot V_{ik} + \varepsilon_i \quad (2)$$

where: NPM_i refers to the five normalised performance measures (ROE, Cash, Debt, Operating efficiency, Q-ratio) for observation i; γ_0 is the intercept term in

the simple linear regression; $\sum_{k=1}^{7} \gamma_k \cdot V_{ik}$ represents the sum of the coefficients γ_k for each of the CEO's personal value scores V_{ik}, as defined above; ε_i is the error term for observation i.

2. Results and discussion

Table 2 presents the correlation coefficients between personal values derived from value profiles generated using the dictionary-based and LLM-based approaches. Overall, both methods demonstrate a general alignment in capturing CEO values, though discrepancies emerge for Universalism and Conformity. These inconsistencies are likely attributable to the specificity of business language in the interviews and inherent differences in data processing frameworks. While a dictionary-based approach detects explicit mentions of value-related words, LLM processing may better reflect implicit value priorities, particularly when CEOs communicate strategically. Importantly, the values of Achievement and Security, which are central to our hypotheses (H1 and H2), exhibit statistically positive correlations across both methods. Although modest in magnitude, these relationships are theoretically and empirically meaningful, providing valuable guidance for subsequent analysis of the link between CEO values and corporate performance.

Table 2. Pearson correlation coefficients: TM values vs. LLM values

Variables	Pearson	Variables	Pearson
Security	0.2***	Self-Direction	0.063***
Conformity	–0.02	Stimulation	0.16***
Tradition	0.13***	Hedonism	0.3***
Benevolence	0.33***	Achievement	0.14***
Universalism	–0.052***	Power	0.22***

Note: * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

Source: own elaboration.

We report the estimation results for the relationship between CEO values and corporate performance in Table 3 for the TM-approach and in Table 4 for the LLM-approach. Acknowledging the inherent complexity in assessing the role of CEO values and the critical influence of methodological choices in their extraction from business contexts, our focus is on uncovering previously

Table 3. Linear mixed-effects regression models I: TM values and corporate performance metrics

Predictors	ROE	Cash	Debt	Operating efficiency	*Q*–ratio
(Intercept)	–1.0607 (0.6188)	0.4764 *** (0.0711)	0.3545 (0.6385)	1.8840 *** (0.2096)	2.8820 (1.9690)
TM.Security	–0.6978 (1.0708)	0.2172 (0.1220)	2.9780 ** (1.0967)	–0.9650 ** (0.3578)	13.4938 *** (3.4008)
TM.Conformity	–0.8459 (1.1033)	–0.0766 (0.1243)	1.3881 (1.1458)	–1.7883 *** (0.3649)	9.4734 ** (3.4793)
TM.Universalism	–0.0566 (0.8530)	–0.3597 *** (0.0978)	0.9339 (0.8926)	–1.2160 *** (0.2871)	3.0603 (2.7192)
TM.Self-direction	–0.6950 (0.8401)	0.1768 (0.0961)	1.8535 * (0.8691)	–2.2276 *** (0.2822)	5.3248 * (2.6762)
TM.Stimulation	1.2020 (0.9396)	0.2808 ** (0.1080)	–0.2459 (0.9700)	–1.6453 *** (0.3171)	–1.2612 (2.9916)
TM.Achievement	1.6497 * (0.7610)	–0.7280 *** (0.0868)	–0.6538 (0.7870)	0.1994 (0.2550)	–5.6557 * (2.4186)
TM.Power	2.2422 ** (0.7668)	–0.3534 *** (0.0878)	–0.5701 (0.8038)	–1.5923 *** (0.2579)	–2.2943 (2.4390)

Predictors	ROE	Cash	Debt	Operating efficiency	*Q*–ratio
Random effects					
σ^2	3.90	0.05	3.75	0.44	40.48
τ_{00}	$0.11_{\text{Year:SIC}}$	$0.02_{\text{Year:SIC}}$	$0.15_{\text{Year:SIC}}$	$0.20_{\text{Year:SIC}}$	$3.56_{\text{Year:SIC}}$
ICC	0.03	0.25	0.04	0.31	0.08
N	27_{Year}	27_{Year}	27_{Year}	27_{Year}	27_{Year}
	10_{SIC}	10_{SIC}	10_{SIC}	10_{SIC}	10_{SIC}
Observations	4342	4559	3804	4526	4533
Marginal R^2 / Conditional R^2	0.009 / 0.037	0.054 / 0.290	0.010 / 0.048	0.032 / 0.334	0.021 / 0.100

Note: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.
Description of dependent variables (in columns): ROE – return on equity, Cash – cash to total assets, Debt – total debt to total assets, Operating efficiency– sales to average total assets, Q-ratio (proxy) – market value of equity plus book value of debt relative to total assets. Variables prefixed with 'TM' refer to values extracted with dictionary-based text mining. Respective value variables represent the proportion of words describing a specific value type to the total number of value-related words in each CEO interview, identified using the value dictionary.

Source: own elaboration.

Table 4. Linear mixed-effects regression models II: LLM values and corporate performance metrics

Predictors	ROE	Cash	Debt	Operating efficiency	*Q*–ratio
(Intercept)	0.1572 (0.3543)	0.0540 (0.0412)	–0.1282 (0.4174)	0.8544 *** (0.1260)	0.6662 (1.1449)
LLM.Security	–0.0207 (0.0630)	0.0245 *** (0.0072)	0.0213 (0.0701)	–0.0532 * (0.0214)	0.4146 * (0.2024)
LLM.Conformity	0.2646 (0.1395)	0.0040 (0.0159)	0.0074 (0.1611)	–0.0638 (0.0477)	–0.2612 (0.4503)
LLM.Universalism	–0.2878 *** (0.0444)	0.0865 *** (0.0052)	0.1486 ** (0.0480)	–0.1268 *** (0.0156)	0.9665 *** (0.1452)
LLM.Self direction	–0.1445 (0.1228)	0.1034 *** (0.0140)	–0.1784 (0.1362)	0.0009 (0.0420)	0.9385 * (0.3952)
LLM.Stimulation	–0.0570 (0.0661)	0.0530 *** (0.0075)	–0.0046 (0.0672)	–0.0857 *** (0.0226)	0.6331 ** (0.2134)
LLM.Achievement	0.0558 (0.1883)	0.0479 * (0.0213)	0.5524 * (0.2158)	0.0330 (0.0641)	0.9433 (0.6033)
LLM.Power	–0.1536 (0.0880)	–0.0198 * (0.0100)	–0.2304 * (0.0949)	–0.0796 ** (0.0299)	–0.9151 ** (0.2825)

Predictors	ROE	Cash	Debt	Operating efficiency	*Q*–ratio
Random effects					
σ^2	3.90	0.05	3.76	0.45	41.24
τ_{00}	$0.06_{\text{Year:SIC}}$	$0.01_{\text{Year:SIC}}$	$0.14_{\text{Year:SIC}}$	$0.22_{\text{Year:SIC}}$	$2.78_{\text{Year:SIC}}$
ICC	0.01	0.20	0.04	0.33	0.06
N	27_{Year}	27_{Year}	27_{Year}	27_{Year}	27_{Year}
	10_{SIC}	10_{SIC}	10_{SIC}	10_{SIC}	10_{SIC}
Observations	4346	4564	3809	4530	4538
Marginal R^2 / Conditional R^2	0.017 / 0.032	0.087 / 0.270	0.006 / 0.041	0.013 / 0.337	0.021 / 0.083

Note: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.
Description of dependent variables (in columns): ROE – return on equity, Cash – cash to total assets, Debt – total debt to total assets, Operating efficiency– sales to average total assets, Q-ratio (proxy) – market value of equity plus book value of debt relative to total assets. Variables prefixed with 'TM' refer to values extracted with dictionary-based text mining. Respective value variables represent the proportion of words describing a specific value type to the total number of value-related words in each CEO interview, identified using the value dictionary.

Source: own elaboration.

overlooked linkages between personal values and the key financial indicators. Although no formal causality tests were performed, the documented stability of personal values over a lifetime (Bardi & Goodwin, 2011) suggests that CEOs' values may influence the corporate financial results. The mechanisms of this influence are explored in light of the existing literature.

Consistent with our hypothesis H1, the TM-approach reveals a positive association between CEOs' Achievement motivation and corporate profitability. However, this association may not hold in the long term, as suggested by the negative coefficients for the firm value as proxied by the Q-ratio. Nevertheless, these relationships are not supported by the GPT-based method, which shows no significant associations in both cases. Instead, the LLM-approach identifies a significant positive relationship between Achievement and both liquidity and leverage, suggesting that Achievement-oriented CEOs may be more frequently observed in firms that maintain financial flexibility and rely on external funding.

In turn, in the case of the Security value, both methods indicate relatively strong alignment. CEOs who prioritise Security tend to be associated with firms maintaining higher levels of financial reserves, which supports our second hypothesis (H2). Interestingly, these reserves may potentially be accompanied by increased corporate debt. While a stronger emphasis on financial stability may come at the expense of operating efficiency and profitability, it could contribute to higher firm value in the long term.

Although CEO values explain only a small proportion of the variance (as indicated by low marginal R^2), the significance of the results underscores their relevance as part of the more complex system shaping corporate financial outcomes.

Table 5 and Table 6 present the estimation results of the linear regression models that examine the respective relationships between values and financial performance, where the financial metrics have been benchmarked against industry averages. The benchmarking was performed by subtracting the industry average from each particular ratio.

As previously, these results support both of our hypotheses. However, there are some differences when compared to the non-benchmarked variables and linear mixed model approach, particularly in the interplay between Security and Debt, as well as between Achievement and the Q-ratio. Both methods suggest no significant long-term association between Achievement or Security value orientations and corporate indebtedness or firm value.

Table 5. Linear regression models I: TM values and benchmarked corporate performance metrics

Predictors	Benchmarked ROE	Benchmarked cash	Benchmarked debt	Benchmarked operating efficiency	Benchmarked *Q*-ratio
(Intercept)	–1.0796 (0.6115)	0.2014 ** (0.0685)	–2.3936 (1.7204)	0.8314 *** (0.1994)	–19.9451 ** (6.4598)
LLM.Security	0.1531 (1.0607)	0.3550 ** (0.1189)	–2.6587 (2.9632)	–1.0563 ** (0.3454)	16.1808 (11.2105)
LLM.Conformity	–0.1888 (1.0979)	0.0217 (0.1223)	5.2297 (3.1117)	–1.5966 *** (0.3560)	20.6135 (11.5473)
LLM.Universalism	0.1998 (0.8404)	–0.2910 ** (0.0943)	2.9299 (2.3930)	–1.0687 *** (0.2739)	19.0099 * (8.8847)
LLM.Self direction	–0.2446 (0.8319)	0.2933 ** (0.0936)	2.5558 (2.3486)	–2.1456 *** (0.2722)	26.4697 ** (8.8185)
LLM.Stimulation	1.6945 (0.9259)	0.3680 *** (0.1037)	–4.7007 (2.6092)	–1.4100 *** (0.3015)	–0.2643 (9.7681)
LLM.Achievement	2.1597 ** (0.7525)	–0.6071 *** (0.0845)	2.1714 (2.1251)	0.1372 (0.2457)	14.8405 (7.9587)
LLM.Power	2.1950 ** (0.7592)	–0.3311 *** (0.0851)	1.5357 (2.1741)	–1.2247 *** (0.2475)	15.0678 (8.0167)
Observations	4342	4559	3804	4526	4533
R^2 / R^2 adjusted	0.008 / 0.007	0.070 / 0.068	0.005 / 0.003	0.037 / 0.035	0.003 / 0.001

Note: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.
Description of industry-benchmarked dependent variables (in columns): ROE – return on equity, Cash – cash to total assets, Debt – total debt to total assets, Operating efficiency– sales to average total assets, Q-ratio (proxy) – market value of equity plus book value of debt relative to total assets. Variables prefixed with 'TM' refer to values extracted with dictionary-based text mining. Respective value variables represent the proportion of words describing specific value type to the total number of value-related words in each CEO interview, identified using the value dictionary.

Source: own elaboration.

Table 6. Linear regression models II: LLM values and benchmarked corporate performance metrics

Predictors	Benchmarked ROE	Benchmarked cash	Benchmarked debt	Benchmarked operating efficiency	Benchmarked *Q*-ratio
(Intercept)	0.0488 (0.3529)	–0.1300 *** (0.0393)	–0.4692 (1.1324)	–0.1002 (0.1165)	–4.1609 (3.7369)
LLM.Security	0.0092 (0.0630)	0.0211 ** (0.0070)	0.0051 (0.1904)	–0.0436 * (0.0208)	–0.9111 (0.6693)
LLM.Conformity	0.2038 (0.1395)	0.0046 (0.0156)	1.0159 * (0.4384)	–0.0502 (0.0462)	3.4336 * (1.4867)
LLM.Universalism	–0.1918 *** (0.0437)	0.0801 *** (0.0049)	–0.1085 (0.1290)	–0.1279 *** (0.0144)	–0.1595 (0.4638)
LLM.Self direction	–0.0615 (0.1223)	0.0941 *** (0.0137)	–0.1958 (0.3697)	–0.0073 (0.0405)	0.2892 (1.2983)
LLM.Stimulation	0.0589 (0.0652)	0.0398 *** (0.0072)	0.1290 (0.1804)	–0.0756 *** (0.0214)	–0.4621 (0.6894)
LLM.Achievement	0.2072 (0.1884)	0.0457 * (0.0210)	0.2233 (0.5879)	0.0416 (0.0622)	1.5881 (1.9950)
LLM.Power	–0.1656 (0.0879)	–0.0267 ** (0.0097)	0.3368 (0.2579)	–0.0611 * (0.0288)	–0.6031 (0.9300)
Observations	4346	4564	3809	4530	4538
R^2 / R^2 adjusted	0.009 / 0.007	0.088 / 0.087	0.006 / 0.004	0.019 / 0.017	0.002 / 0.001

Note: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Description of industry-benchmarked dependent variables (in columns): ROE – return on equity, Cash – cash to total assets, Debt – total debt to total assets, Operating efficiency – sales to average total assets, *Q*-ratio (proxy) – market value of equity plus book value of debt relative to total assets. Variables prefixed with 'LLM' refer to values extracted with ChatGPT-4o mini. Respective value variables represent the demeaned value scores, derived by the LLM model using the Portrait Value Questionnaire (PVQ-21) approach.

Source: own elaboration.

Conclusions

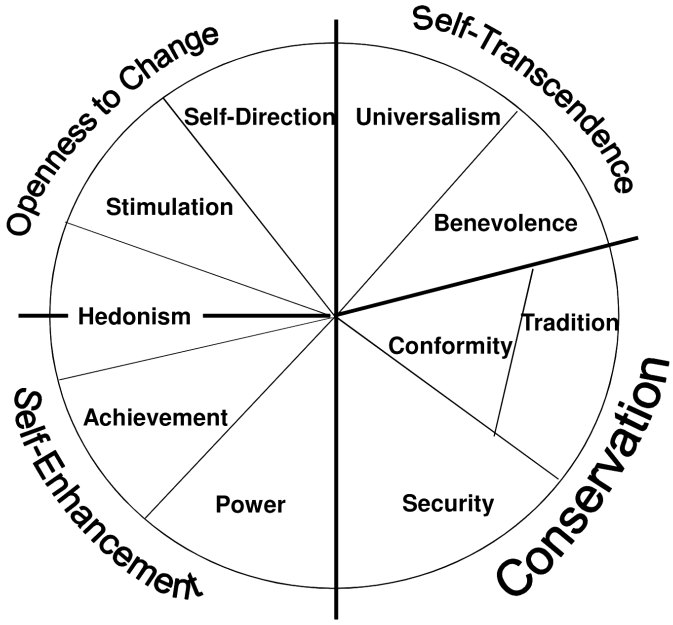
While the research interest on the role of CEOs' personality, particularly their values, in corporate decision-making has been steadily growing, there still exists a gap in understanding how these values link to corporate outcomes at the company level. This study contributes to the existing literature by providing novel empirical evidence on the relationships between CEO personal values and corporate financial performance across various dimensions, including liquidity, profitability, solvency, operating efficiency, and valuation. Utilising two complementary approaches – standard text mining and emerging LLM-based approach – our findings reveal that a stronger CEO emphasis on the Achievement value is positively associated with corporate profitability. In contrast, CEOs driven by the Security value are more likely to be found in firms prioritising financial stability, a factor that may contribute to greater firm value in the long term. While the results are consistent with both of our hypotheses, some mixed findings underline the complexity of assessing the role of CEO values in shaping corporate performance and highlight the importance of methodological choice in extracting CEO value profiles from the textual content.

Nevertheless, the findings may offer valuable insights for various stakeholders in the corporate world. They suggest that CEO values may, at least to some extent, help explain differences in companies' financial outcomes. This knowledge may assist boards of directors, shareholders or other stakeholders in shaping board composition, guiding executive selection or aligning strategic decision-making with long-term goals. Furthermore, recognising the connection between CEO values and corporate financial performance can help investors better anticipate a firm's financial performance or strategic trajectory, leading to more informed investment decisions. Finally, the application of advanced textual analysis techniques, particularly those powered by innovative LLM-based tools, demonstrates the potential for a scalable, data-driven executive profiling.

Our research has certain limitations. Firstly, the textual data set consists of business interviews that may not entirely capture the private opinions of CEOs. Despite the efforts to mitigate biases through the LLM-approach's contextual understanding, the inference of personal values from publicly delivered interviews, where strategic communication might play a role, remains a nuanced challenge inherent to such methodologies. Secondly, distinct methods for normalisation of value-related variables for both approaches, conditioned by the nature of the data, do not allow for direct comparison of the effect magnitude. Utilising alternative text resources and text processing frameworks could potentially enhance our results. Thirdly, due to the correlational nature of the approach, definitive causal claims about the relationships be-

tween CEO values and corporate financial outcomes cannot be made. Future research employing longitudinal data with lagged variables or experimental designs could better support causal inference. In our future research, we will strive to overcome these limitations and improve the robustness of the results.

Appendix A



The motivational continuum of 10 personal values (according to Schwartz's Theory of Basic Human Values)

Source: (Schwartz, 2012).

Appendix B

Prompt for deriving CEO personal values from interviews

Codebook: You are an expert psychologist. Your goal is to estimate the importance of basic human values for a company's CEO, according to Schwartz's theory of basic human values, through the answers given by the CEO in an interview for a business magazine. Provide an analysis similar to the PVQ21 questionnaire but based on the interview. The score for each value can be between 1 and 6 with 6 being the highest possible value. Keep in mind that the input text itself is not a value questionnaire but an interview primarily concerned with the business environment and that the terminology used and topics discussed are biased accordingly. Your output must be in JSON-format. Do not provide any tokens outside of the JSON! # Example output: { 'Self-Direction': 'Score', 'Stimulation': 'Score', 'Hedonism': 'Score', 'Achievement': 'Score', 'Power': 'Score', 'Security': 'Score', 'Conformity': 'Score', 'Tradition': 'Score', 'Benevolence': 'Score', 'Universalism': 'Score' } ## Input: # Interview date: <interview-date> # CEO: <ceo-name> # Company ticker: <company-ticker> # Interview answers: <interview-answers>

Source: own elaboration.

Appendix C

Example model outputs for input texts:

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4,\n \”Hedonism\”: 2,\n \”Achievement\”: 6,\n \”Power\”: 5,\n \”Security\”: 4,\n \”Conformity\”: 3,\n \”Tradition\”: 2,\n \”Benevolence\”: 4,\n \”Universalism\”: 5\n}”, “refusal”: null}, “logprobs”: null, “finish_reason”: “stop”}], “usage”: {“prompt_tokens”: 2256, “completion_tokens”: 85, “total_tokens”: 2341, “prompt_tokens_details”: {“cached_tokens”: 0, “audio_tokens”: 0}, “completion_tokens_details”: {“reasoning_tokens”: 0, “audio_tokens”: 0, “accepted_prediction_tokens”: 0, “rejected_prediction_tokens”: 0}}, “system_fingerprint”: “fp_bba3c8e70b”}}, “error”: null}
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custom_id,original_id,iteration,Self_direction,Stimulation,Hedonism,Achievement,Power,Security,Conformity,Tradition,Benevolence,Universalism
22340,22340,1,5,4,2,6,5,4,3,4,5,4
22324,22324,1,5,4,2,6,5,4,3,2,4,5
22322,22322,1,4,3,2,5,4,5,3,2,4,3

Source: own elaboration.

Appendix D

Descriptive statistics

Variables	*n*	mean	sd	median	min	max	skew	kurtosis	se
TM.Security	4933	0.04	0.04	0.02	0.00	0.31	2.14	5.71	0.00
TM.Conformity	4933	0.06	0.04	0.05	0.00	0.48	2.07	11.57	0.00
TM.Tradition	4933	0.02	0.02	0.01	0.00	0.24	2.77	12.19	0.00
TM.Benevolence	4933	0.06	0.04	0.05	0.00	0.31	1.34	2.97	0.00
TM.Universalism	4933	0.14	0.05	0.13	0.00	0.39	0.62	0.69	0.00
TM.Self-direction	4933	0.15	0.06	0.14	0.02	0.43	0.69	0.78	0.00
TM.Stimulation	4933	0.09	0.04	0.08	0.00	0.31	0.85	1.15	0.00
TM.Hedonism	4933	0.02	0.02	0.01	0.00	0.29	4.02	34.07	0.00
TM.Achievement	4933	0.26	0.07	0.26	0.03	0.55	0.26	0.10	0.00
TM.Power	4933	0.18	0.06	0.17	0.03	0.45	0.58	0.54	0.00
LLM.Security	4943	0.35	0.66	0.10	–1.40	2.40	1.10	0.14	0.01
LLM.Conformity	4943	–0.98	0.29	–1.00	–2.20	0.50	0.66	1.25	0.00
LLM.Tradition	4943	–1.55	0.79	–1.90	–2.60	2.10	1.37	0.91	0.01
LLM.Benevolence	4943	–0.04	0.63	–0.10	–1.90	2.00	0.32	–0.14	0.01
LLM.Universalism	4943	0.26	0.79	0.20	–1.80	2.10	–0.04	–0.66	0.01
LLM.Self_direction	4943	0.80	0.32	0.90	–1.60	1.40	–1.20	1.98	0.00

Variables	n	mean	sd	median	min	max	skew	kurtosis	se
LLM.Stimulation	4943	–0.02	0.52	–0.10	–1.20	2.10	1.65	3.87	0.01
LLM.Hedonism	4943	–1.43	0.53	–1.30	–2.60	1.20	0.83	2.15	0.01
LLM.Achievement	4943	1.88	0.25	1.90	0.30	2.60	–0.71	1.19	0.00
LLM.Power	4943	0.73	0.49	0.90	–1.50	1.60	–1.52	2.02	0.01
ROE	4347	–0.29	2.01	0.06	–37.87	2.58	–12.76	201.99	0.03
Cash	4570	0.26	0.27	0.15	0.00	0.99	0.99	–0.19	0.00
Debt	3815	0.59	1.98	0.38	0.02	41.85	15.24	271.14	0.03
Operating efficiency	4535	0.83	0.80	0.65	0.00	6.99	2.10	8.14	0.01
Q-ratio	4543	3.03	6.69	1.60	0.34	120.75	11.55	172.45	0.10

Notes: The following information is contained in the succeeding columns: name of variable (vars), number of observations (n), mean, standard deviation (sd), median, minimum value (min), maximum value (max), skewness (skew), kurtosis. and standard error (se). Variables prefixed with 'TM' refer to values extracted with dictionary-based text mining, while those prefixed with 'LLM' to values extracted with ChatGPT-4o mini.

Source: own elaboration.

References

Adams, R. B., Licht, A. N., & Sagiv, L. (2011). Shareholders and stakeholders: How do directors decide? *Strategic Management Journal*, *32*(12), 1331–1355. https://doi.org/10.2139/ssrn.1549482

Banning, F., Reale, J., & Roos, M. (2023). *The complexity of corporate culture as a potential source of firm profit differentials*. https://doi.org/10.2139/ssrn.4508695

Bardi, A. & Goodwin, R. (2011). The dual route to value change: Individual processes and cultural moderators. *Journal of Cross-Cultural Psychology*, *42*(2), 271–287. https://doi.org/10.1177/0022022110396916

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*(1). https://doi.org/10.18637/jss.v067.i01

Berle, A. A. (1932). For whom corporate managers are trustees: A note. *Harvard Law Review*, *45*(8), 1365–1372. https://doi.org/10.2307/1331920

Bernile, G., Bhagwat, V., & Rau, P. R. (2017). What doesn't kill you will only make you more risk-loving: Early-life disasters and CEO behavior. *The Journal of Finance*, *72*(1), 167–206. https://doi.org/10.1111/jofi.12432

Berson, Y., Oreg, S., & Dvir, T. (2008). CEO values, organizational culture and firm outcomes. *Journal of Organizational Behavior*, *29*(5), 615–633. https://doi.org/10.1002/job.499

Bilsky, W., Janik, M., & Schwartz, S. H. (2011). The structural organization of human values-evidence from three rounds of the European Social Survey (ESS). *Journal of Cross-Cultural Psychology*, *42*(5), 759–776. https://doi.org/10.1177/0022022110362757

Bromiley, P., & Rau, D. (2016). Social, behavioral, and cognitive influences on upper echelons during strategy process: A literature review. *Journal of Management*, *42*(1), 174–202. https://doi.org/10.1177/0149206315617240

Carpenter, M. A., Geletkanycz, M. A., & Sanders, W. G. (2004). Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management*, *30*(6), 749–778. https://doi.org/10.1016/j.jm.2004.06.001

Chen, Y., Dou, P. Y., Rhee, S. G., Truong, C., & Veeraraghavan, M. (2015). National culture and corporate cash holdings around the world. *Journal of Banking & Finance*, *50*, 1–18. https://doi.org/10.1016/j.jbankfin.2014.09.018

Chen, Y. R., Ho, K. Y. & Yeh, C. W. (2020). CEO overconfidence and corporate cash holdings. *Journal of Corporate Finance*, *62*, 101577. https://doi.org/10.1016/j.jcorpfin.2020.101577

Custódio, C., & Metzger, D. (2014). Financial expert CEOs: CEO's work experience and firm's financial policies. *Journal of Financial Economics*, *114*(1), 125–154. https://doi.org/10.1016/j.jfineco.2014.06.002

Damodaran, A. (2014). *Applied corporate finance* (4th ed.). John Wiley & Sons.

Damodaran, A. (2020). *Data update 6 for 2020: Profitability, returns and the value of growth*. https://aswathdamodaran.blogspot.com/2020/03/data-update-6-for-2020-profitability.html

ESS. (2024). *ESS11 – integrated file, edition 3.0*. https://doi.org/10.21338/ess11e01_0

Faccio, M., Marchica, M. T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, *39*, 193–209. https://doi.org/10.1016/j.jcorpfin.2016.02.008

Fischer, R., Karl, J., Fetvadjiev, V., Grener, A., & Luczak-Roesch, M. (2022). Opportunities and challenges of extracting values in autobiographical narratives. *Frontiers in Psychology*, *13*, 886455. https://doi.org/10.3389/fpsyg.2022.886455

Gorgievski, M. J., Ascalon, M. E., & Stephan, U. (2011). Small business owners' success criteria, a values approach to personal differences. *Journal of Small Business Management*, *49*(2), 207–232. https://doi.org/10.1111/j.1540-627x.2011.00322.x

Greiner, M., Kim, J., & Thor, J. C. (2023). CEO values as antecedents to corporate political activity: An empirical exploration. *Journal of Business Research*, *160*, 113808. https://doi.org/10.1016/j.jbusres.2023.113808

Gröber, M., Freisinger, E., Henkel, S., & Heidenreich, S. (2023). How valuable are personal values? Investigating personal values and their effect on entrepreneurial performance. *International Journal of Entrepreneurial Venturing*, *15*(6), 534–559. https://doi.org/10.1504/ijev.2023.10061495

Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano J., M. Lagos, P. Norris, E. Ponarin & B. Puranen (Eds.). (2022). *World Values Survey Wave 7(2017–2022)*. World Values Survey. https://doi.org/10.14281/18241.20

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *The Academy of Management Review*, *9*(2), 193–206. https://doi.org/10.2307/258434

Hoffmann, W. H., & Meusburger, L. (2018). How CEO values and TMT diversity jointly influence the corporate strategy making process. *Schmalenbach Business Review*, *70*, 149–187. https://doi.org/10.1007/s41464-017-0042-y

Hu, C., & Liu, Y. J. (2015). Valuing diversity: CEOs' career experiences and corporate investment. *Journal of Corporate Finance*, *30*, 11–31. https://doi.org/10.1016/j.jcorpfin.2014.08.001

Jensen, M. (2001). Value maximisation, stakeholder theory, and the corporate objective function. *European Financial Management*, *7*(3), 297–317. https://doi.org/10.1111/1468-036x.00158

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. *Harvard Business Review*, *70*(1), 71–79.

Kojima, T., Gu, S. S., Reid, M., Matsuo, Y., & Iwasawa, Y. (2022). *Large language models are zero-shot reasoners*. arXiv preprint arXiv:2205.11916

Koller, T., Goedhart, M., & Wessels, D. (2025). *Valuation: Measuring and managing the value of companies*. John Wiley & Sons.

Kotey, B., & Meredith, G. G. (1997). Relationships among owner/manager personal values, business strategies, and enterprise performance. *Journal of Small Business Management*, *35*(2). https://www.researchgate.net/publication/279562195_Relationships_among_ownermanager_personal_values_business_strategies_and_enterprise_performance

Kraatz, M. S., Flores, R., & Chandler, D. (2020). The value of values for institutional analysis. *Academy of Management Annals*, *14*(2), 474–512. https://doi.org/10.5465/annals.2018.0074

Liu, C., Xu, L., Yang, H., & Zhang, W. (2023). Prosocial CEOs and the cost of debt: Evidence from syndicated loan contracts. *Journal of Corporate Finance*, *78*, 102316. https://doi.org/10.1016/j.jcorpfin.2022.102316

Naeem, M., & Khurram, S. (2020). Does a CEO's culture affect dividend policy? *Finance Research Letters*, *35*, 101302. https://doi.org/10.1016/j.frl.2019.09.017

Ndruru, F. (2025). The role of liquidity management in enhancing corporate financial stability: A systematic literature review on cash reserves and marketable securities strategies. *Productivity: Journal of Integrated Business, Management, and Accounting Research*, *2*(1), 9–17.

Nguyen, T. K. G., Ozawa, T., & Fan, P. (2024). Sanpo-yoshi, top management personal values, and ESG performance. *Journal of Behavioral and Experimental Finance*, *41*, 100903. https://doi.org/10.1016/j.jbef.2024.100903

OpenAI. (2024a). GPT-4o mini: advancing cost-efficient intelligence. https://openai.com/index/gpt-4o-mini-advancing-cost-efficient-intelligence/

OpenAI. (2024b). *GPT-4o-mini-2024-07-18*. https://chat.openai.com/chat

Osei Bonsu, C., Liu, C., & Yawson, A. (2024). The impact of CEO attributes on corporate decision-making and outcomes: A review and an agenda for future research. *International Journal of Managerial Finance*, *20*(2), 503–545. https://doi.org/10.1108/ijmf-02-2023-0092

Parmenter, D. (2015). *Key performance indicators: Developing, implementing, and using winning KPIs*. John Wiley & Sons.

Ponizovskiy, V., Ardag, M., Grigoryan, L., Boyd, R., Dobewall, H., & Holtz, P. (2020). Development and validation of the personal values dictionary: A theory–driven tool for investigating references to basic human values in text. *European Journal of Personality*, *34*(5), 885–902. https://doi.org/10.1002/per.2294

Robinson, T. R., Henry, E., Pirie, W. L., & Broihahn, M. A. (2012). *International financial statement analysis* (vol. 39). John Wiley & Sons.

Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The big five personality factors and personal values. *Personality and Social Psychology Bulletin*, *28*(6), 789–801. https://doi.org/10.1177/0146167202289008

Sagiv, L., Sverdlik, N., & Schwarz, N. (2011). To compete or to cooperate? Values' impact on perception and action in social dilemma games. *European Journal of Social Psychology*, *41*(1), 64–77. https://doi.org/10.1002/ejsp.729

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, *25*, 1–65. https://doi.org/10.1016/s0065-2601(08)60281-6

Schwartz, S. H. (2005). Robustness and fruitfulness of a theory of universals in individual human values. In A. Tamayo & J. B. Porto (Eds.), *Valores e trabalho* (pp. 56–95). Editora Universidade de Brasilia.

Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online Readings in Psychology and Culture*, *2*(1). https://doi.org/10.9707/2307-0919.1116

Wahlen, J. M., Baginski, S. P., & Bradshaw, M. T. (2011). *Financial reporting, financial statement analysis, and valuation: A strategic perspective*. Cengage Learning.

Wang, L. H., & Fung, H. G. (2022). The effect of female CEO and CFO on tail risk and firm value. *Finance Research Letters*, *47*, 102693. https://doi.org/10.1016/j.frl.2022.102693

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT Press.