

Article

The Influence of the CEO on Auditor Choice in Private Firms: An Interplay of Willingness and Ability

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Abstract: Reliable financial reporting is highly important when aiming for sustainable development and the long-term financial stability of the entire economy. An external audit is one of the main monitoring mechanisms to warrant this reliability. While auditing serves as an independent monitoring mechanism towards management, studies indicate that management is often the driving force behind auditor appointments and terminations, especially if it is willing to drive auditor choice. While this raises questions about an auditor's independence and resulting audit quality, willingness will only have an impact when management is also able to exert its will. This study, therefore, examines to what extent ability strengthens the CEO's willingness to appoint a non-Big Four auditor. Using a dataset of 316 private firms, regression results show that when the CEO is willing to appoint a non-Big Four auditor and also has sufficient power, it is less likely that a Big Four auditor is actually appointed, at least when the control effectiveness of the board is weak such that the CEO can exert his/her power. This emphasizes the need for both shareholders and legislators to ensure that the independence of the auditor is guaranteed and to implement complementary monitoring mechanisms like a strong board.

Keywords: auditor choice; CEO influence; willingness; ability; private firm



Citation: Corten, M.; Steijvers, T.; Lybaert, N.; Coeckelbergs, C. The Influence of the CEO on Auditor Choice in Private Firms: An Interplay of Willingness and Ability. *Sustainability* **2021**, *13*, 6710. <https://doi.org/10.3390/su13126710>

Academic Editor: Zabihollah Rezaee

Received: 27 April 2021

Accepted: 8 June 2021

Published: 13 June 2021

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1. Introduction

Decent work and economic growth is one of the 17 Sustainable Development Goals. Given that private firms are considered to be one of the main growth engines of an economy [1], it is of utmost importance that people and institutions keep investing in private firms. In this regard, the reliability of accounting information or financial statements of these firms is highly relevant. The absence of stock prices and analyst reports makes the private firm's stakeholders almost fully dependent on the financial statements. By verifying the validity of the financial statements, auditing is extremely important because it reduces the existing information asymmetry between the firm and its stakeholders.

Auditor choice is an intensively investigated topic, which generally examines the drivers for appointing a Big Four auditor over a non-Big Four auditor (e.g., [2–4]). These drivers are mainly related to agency conflicts as auditing exists to assist a firm's shareholders in monitoring and contracting with management, in this way reducing agency problems [5]. Supported by the arguments of DeAngelo [6], Big Four auditors are considered to provide a higher level of audit quality and to perform a stronger monitoring role in comparison to non-Big Four auditors. Therefore, firms with severe agency conflicts are generally expected to appoint a Big Four auditor.

Even though auditing serves as a monitoring mechanism towards management, a qualitative study by Cohen et al. [7] points out that '... management often remains the driving force behind auditor appointments and terminations'. This is worrying since management might appoint the (type of) auditor it prefers, irrespective of what the firm would most benefit from. For example, when management perceives an audit as less useful,

it will prefer the auditor that is the least expensive. Since the Big Four firms charge an audit fee premium compared with non-Big Four audit firms (e.g., [8]), it is more likely that a non-Big Four auditor will be appointed. Furthermore, these audit firms are perceived to perform less rigorous audit work and less monitoring compared to the Big Four audit firms (e.g., [6]). This is another reason why management that perceives an audit as less useful will appoint a non-Big Four auditor. However, management's preference may not correspond to what is best for the firm's stakeholders. Stakeholders may benefit from appointing a Big Four auditor for various reasons: to obtain a higher perceived level of assurance in order to be better able to monitor management, to gather specialized knowledge and advice, or to get easier access to external funding and lower interest rates [3,9].

Especially in a private firm context, the influence of management on auditor choice is worth investigating. As these firms often lack the safeguards that listed firms have (i.e., audit committees, oversight from stock markets, analysts, etc.) [10,11], this setting might create even more opportunities for management to make the actual audit decision. Moreover, due to the absence of safeguards, the shareholders of private firms are often only able to rely on the financial statements to monitor management [11], increasing the risk of a monitoring deficiency resulting from management appointing a non-Big Four auditor.

Despite the call of Carcello et al. [12] and Cohen et al. [13], investigations of the influence of management on auditor choice remain scarce. Moreover, the few exceptions that did answer the call focus solely on the willingness of management to influence auditor choice [14–16]. These studies implicitly assume that if management is *willing* to appoint a (Big Four/non-Big Four) auditor, it is also *able* to do so. However, by ignoring ability, these studies do not take into account that some managers are more able to push their will through than others. In line with De Massis et al. [17], we claim that willingness and ability should not be examined in isolation. In this study, we therefore examine to what extent ability strengthens the negative effect of the CEO's willingness to appoint a non-Big Four auditor on the actual appointment of a Big Four auditor in a private firm context.

As managerial power enables managers to influence decisions, ability is considered to arise from CEO power [18,19]. Translated to the audit context, we assume that a CEO needs power to influence the audit appointment decision. However, CEO power will not necessarily result in the ability to influence the auditor choice. More specifically, considering monitoring and controlling management as one of the fundamental responsibilities of the board of directors [20,21], CEO power might be constrained by the control effectiveness of the board of directors. In order to investigate ability, we argue that both CEO power and the control effectiveness of the board of directors should be taken into account. More specifically, a strong, controlling board might restrict the extent to which a CEO might use his/her power to push through his/her will to appoint a non-Big Four auditor.

This argumentation results in a moderated moderation model in which CEO power and the control effectiveness of the board are identified as moderators. More specifically, if the CEO wants to appoint a non-Big Four auditor, we hypothesize that this willingness is moderated by his/her power in such a way that it will only lead to the actual appointment of a non-Big Four auditor when the CEO has enough power to push through his/her will. CEO power, in its turn, is hypothesized to be moderated by the control effectiveness of the board of directors as we expect an effective controlling board to constrain a CEO's power.

A quantitative approach will be used for our main research objective, which focuses on examining to what extent a CEO's willingness and ability to affect auditor choice will actually impact the audit decision. The combination of questionnaire data and archival data of 316 Belgian private firms with a statutory audit requirement is processed by logistic regression models based on the Hayes technique [22]. The regression results show that, in firms where board control effectiveness is low, CEOs who are willing to appoint a non-Big Four auditor are more able to exert their will if they have more power. On the other hand, when the board control effectiveness is high, the results indicate that even though a CEO has the willingness and power to appoint a non-Big Four auditor, the board of directors, which has a strong control effectiveness, will ensure that a Big Four auditor is appointed.

This study contributes to the audit literature in several ways. First, this article fills an identified gap by actually investigating the influence of management on auditor choice. Furthermore, as the few exceptions that do examine management's influence on auditor choice focus solely on the willingness of management, this study adds to the previous research by investigating both willingness and ability. Moreover, our findings show that while CEO power might enable a CEO to exert his/her will regarding the auditor choice, the control effectiveness of the board of directors has a crucial effect on whether the CEO can exert this power. This study also has several practical implications as it shows that the independence of the auditor could already be jeopardized in the appointing phase. Being critical towards the auditor suggested by the CEO and installing complementary monitoring mechanisms such as a strong board of directors are therefore important lessons to learn from this study for shareholders. Moreover, legislators and the auditing profession itself should be aware of a potentially negative effect on audit quality resulting from CEOs that have too much impact on the audit decision, although this requires further investigation.

The paper proceeds as follows. Section 2 provides a literature review on auditor choice in private firms. In this section, we also elaborate on the willingness and ability aspects and develop our hypotheses. In Section 3, the methodology and variables are explained. Section 4 analyses the results. The conclusions, limitations, and directions for future research follow in Section 5.

2. Theory and Hypotheses

2.1. Auditor Choice and Agency Conflicts

Since shareholders and managers are considered to be self-interested, the separation of ownership and control in a firm will lead to conflicts of interest between both actors [21]. Although monitoring and contracting management (e.g., by variable compensation contracts) might reduce agency conflicts, these activities are often based on the financial statements prepared by management, which may therefore present an overly positive view of the firm's performance [11]. By verifying the validity of these financial statements, auditing reduces this existing information asymmetry and, in this way, mitigates the risk of managers showing opportunistic behavior due to agency conflicts [5]. The need for (high-quality) auditing is therefore considered to be a direct result of the level of agency conflicts.

Most empirical studies also support this hypothesis based on agency theory as they find a positive association between agency conflicts and auditor choice (e.g., [2–4,14]). As the sample firms in most of these studies already had a statutory audit requirement, auditor choice was generally operationalized as the choice for a Big Four auditor versus a non-Big Four auditor. Firms with severe agency conflicts are expected to appoint a Big Four over a non-Big Four auditor based on DeAngelo [6], who argues that large audit firms provide a higher level of audit quality. More specifically, she argues that larger firms have a greater reputation to lose in case of an audit failure. Therefore, they have greater incentives to avoid audit failures by assuring the independence and competence of their auditors. Furthermore, because the Big Four firms generally have more clients, total fees are allocated widely, which makes these firms less financially dependent on one particular client (e.g., [23,24]). Prior research also shows that the Big Four audit firms are characterized by higher investments in staff recruitment, training, well-developed audit programs, etc. (e.g., [25,26]). This comes at a cost as it results in the Big Four firms exhibiting an audit fee premium compared with non-Big Four audit firms [8,27].

As private firms are often characterized by the unification of management and ownership functions, agency conflicts were traditionally not supposed to be an issue in those organizations [21]. The majority of pioneering studies about auditor choice are therefore focused on listed companies [16]. Recent studies, however, have shown that private firms are not free of conflicts at all. In these firms, agency problems may, for example, exist between the controlling and minority shareholders in which the controlling shareholder-managers might have the incentive to act opportunistically towards the minority shareholders that are not involved in management (e.g., [28]). Since these minority shareholders will not

have direct access to financial information to monitor such potential misconduct, external auditing is also found to be highly valuable for them [4,29]. Lennox [11] even argues that the monitoring value of external auditing may be higher for private firms than for listed firms. Private firms are less vulnerable to takeovers, there is no stock market constraining managerial activities, and these companies are required to disclose less accounting information, which results in stakeholders suffering more from information asymmetry.

2.2. Willingness of Management to Influence Auditor Choice

Although auditing is considered to be a monitoring mechanism towards management, a qualitative study by Cohen, Krishnamoorthy, and Wright [7] points out that ‘... management often remains the driving force behind auditor appointments and terminations’. The finding that management actually decides on the appointment of the auditor is worrying since management might appoint the (type of) auditor which he/she prefers, irrespective of what the firm would most benefit from.

While most authors acknowledge the potentially large influence management, in general, may have on accounting and auditing decisions (e.g., [30–34]), this influence is generally ignored in the analyses of accounting studies. Several researchers [12,13] therefore called for more quantitative studies that do take into account the influence of management on the audit process. Especially in a private firm context where firms often lack the safeguards that listed firms have (i.e., audit committees, oversight from stock markets, etc.) [10,11], it is more likely that management will make the actual audit decision, potentially reducing the ability of the shareholders to monitor management.

The few exceptions that answered the call made by Carcello, Hermanson, and Ye [12] and Cohen, Krishnamoorthy, and Wright [13] therefore examined the private firm context and mainly focused on the willingness of management to influence auditor choice. More specifically, these studies examine the association between management’s perception of auditing and auditor choice [14–16]. The idea is that management’s willingness to demand a voluntary audit or to appoint a Big Four auditor depends on management’s perception of auditing (i.e., how useful do I consider external auditing).

Both Collis, Jarvis, and Skerratt [15] and Niemi, Kinnunen, Ojala, and Troberg [16] found that a positive managerial perception towards auditing has a positive effect on the choice of a voluntary audit. Additionally, in the context of firms having a statutory audit requirement, willingness seems to play an important role as well. In that setting, Corten, Steijvers, and Lybaert [14] found that positive managerial perceptions towards auditing lead to a higher probability of appointing a Big Four auditor. Thus, it seems that if management perceives an audit to be useful, it is more willing to appoint a Big Four auditor. When they perceive an audit as less useful, we expect managers to have a lower willingness to pay for the ‘Big Four premium’. Moreover, management will prefer the auditor that is perceived to be the least demanding and monitoring. Therefore, they are more willing to appoint a non-Big Four auditor.

2.3. Management Influence: A Combination of Willingness and Ability

While valuable, the aforementioned studies implicitly assume that if management is *willing* to appoint a (Big Four/non-Big Four) auditor, it is also *able* to do so. However, willingness will only have an impact if management also has the ability to influence the auditor appointment decision. By ignoring ability, these studies do not take into account that some managers may be more able to push their will through than others. Only focusing on willingness, therefore, gives a too one-sided view of management’s influence on auditor choice.

We follow De Massis, Kotlar, Chua, and Chrisman [17], who argue that ability and willingness should not be examined in isolation. They state that ‘ability and willingness act separately as necessary but individually insufficient conditions’ (p. 345), meaning that both are required, not just one or the other. In other words, no particular behavior will be exhibited by someone unless that person has both the willingness and the ability to do so.

2.3.1. Ability: Managerial Power

Ability is generally related to managerial power, which is defined as ‘the capacity of individual actors to exert their will’ [19]. The underlying thought is that managerial power leads to the ability to influence decisions [18,19]. Translated to the audit context, power enables management to influence decisions along the audit process. With respect to willingness, we argue that if the CEO considers an audit to be less useful, he/she might consider it as a service that consumes too much time and resources and we therefore expect him/her to be less willing to appoint a Big Four auditor. We expect the CEO to fulfill the legal requirement but not be willing to further invest in a Big Four auditor who is exhibiting an audit fee premium and who is perceived to perform more audit work and monitoring. We expect him/her to be satisfied with a less expensive non-Big Four auditor, regardless of the needs of the firm and its stakeholders. Whether this also leads to a reduced likelihood of appointing a Big Four auditor will depend on the power of the CEO. More specifically, we argue that CEOs who are willing to have a non-Big Four auditor also need the ability to actually appoint this auditor. In the case that a CEO does not have the power to influence the audit appointment decision, it will not result in his/her preferred outcome. Therefore, we argue that ability should be considered as a moderator in such a way that the CEO’s willingness to appoint a non-Big Four auditor reduces the likelihood that a Big Four auditor will be appointed if the CEO also has the power to do so. This leads to the following hypothesis:

Hypothesis 1 (H1). *A CEO’s willingness to appoint a non-Big Four auditor reduces the likelihood that a Big Four auditor will be appointed if the CEO also has the power to do so.*

2.3.2. Ability: A Combination of CEO Power and the Board of Directors

To this point, we have considered ability as managerial power (i.e., the ability specific to a person based on his/her power, not taking into account external factors). However, the ability to influence decisions does not only relate to a CEO’s power but also to the board of directors as it determines the extent to which managerial power can be exerted. More specifically, as controlling management is one of the fundamental responsibilities of the board of directors in its role of representing the interests of the shareholders [20,21], an effective controlling board is considered to restrain managerial discretion (i.e., power). This is supported by empirical studies that indicate that an effective controlling board of directors will restrict (the use of) managerial power. For example, Ali and Teulon [35] find that board control effectiveness restricts managers from taking control of their compensation. Translated to an audit context, we therefore argue that an effective controlling board will also prevent the CEO from exerting his/her will regarding auditor choice, especially when he/she wants to use his/her power to appoint a non-Big Four over a Big Four auditor. In its role as a controlling mechanism, an effective controlling board of directors is expected to ensure that decisions are taken in the best interest of the shareholders. This leads to the following hypothesis:

Hypothesis 2 (H2). *An effective controlling board will reduce the effect that CEO power has on the negative relationship between the CEO’s willingness to appoint a non-Big Four auditor and the likelihood of appointing a Big Four auditor.*

The conceptual model can be found in Figure 1.

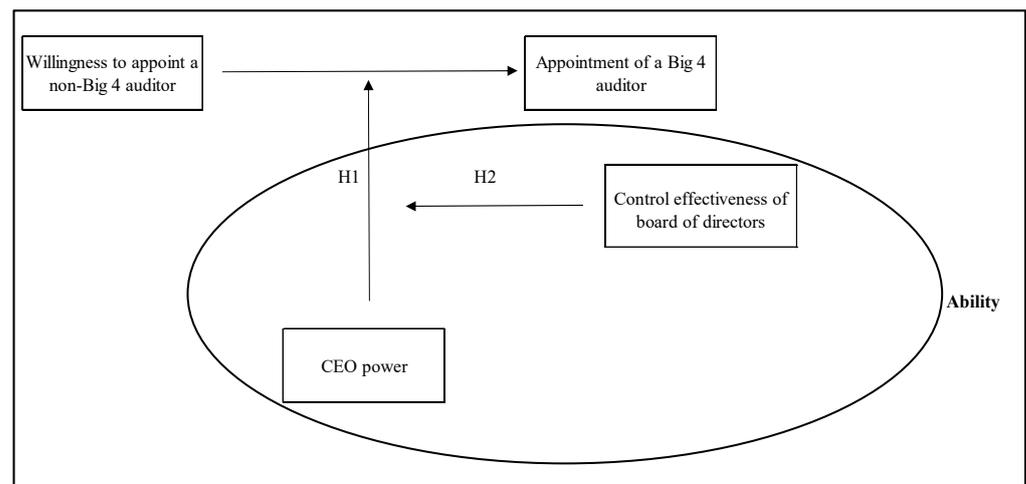


Figure 1. Conceptual model.

3. Data and Methodology

3.1. Sample

We tested our hypotheses in the Belgian private firm context. An important aspect of this context is that the criteria to have a statutory audit requirement are rather low. More specifically, during the period of this study (2015), Belgian firms were required to have their financial statements audited if the annual average workforce is higher than 100 or if at least two of the following thresholds were exceeded: a workforce of 50 employees, an asset total of EUR 3,650,000, and turnover of EUR 7,300,000. Another specificity of the Belgian private firm context is that private firms are not required to install an audit committee. Instead, the board of directors generally has to suggest an auditor to the general shareholders' meeting, which will appoint the auditor. Therefore, if the board of directors of a Belgian private firm wants a different auditor as the CEO, it also has the legal ability to communicate this to the general shareholders' meeting. However, rubber-stamp boards, which only ratify the preferences of management, often arise in the Belgian private firm context [36].

The population of firms used in this study consists of all active Belgian private firms that have a statutory audit requirement and are not operating in the financial services industry. These firms are drawn from the Bel-First database of Bureau van Dijk. A structured questionnaire to collect data regarding the explanatory variables has been sent to the CEOs of the selected population in February 2015 ($n = 8662$). With 384 CEO responses, a response rate of 4.4 percent was obtained. T-tests (cut-off points at 10, 20, and 30 percent) were performed between early and late respondents to control for potential response bias, resulting in no significant differences. By combining the questionnaire data with publicly available accounting data from the Bel-First database, we obtained data for the dependent and control variables. After removing cases with incomplete data, we obtained our final sample of 316 firms. We performed a dropout analysis by comparing the means regarding the continuous variables SIZE, LEVERAGE, and ROA of our sample firms with the population but found no significant differences. In order to alleviate potential outlier problems, all continuous variables were winsorized at the 1st and 99th percentiles.

3.2. Variables

3.2.1. Dependent Variable

In line with most auditor choice studies [11,28,37], the dependent variable BIG4 is a dummy variable, coded 1 if the firm appointed a Big Four auditor and 0 if it appointed a non-Big Four auditor.

3.2.2. Explanatory Variables

We proxy the CEO's willingness to appoint a non-Big Four auditor based on his/her functional perception towards auditing in line with Collis, Jarvis, and Skerratt [15]; Corten, Steijvers, and Lybaert [14]; and Niemi, Kinnunen, Ojala, and Troberg [16]. We argue that a CEO who perceives an audit as less useful is willing to appoint the least expensive auditor and the one that is perceived to perform the least monitoring and audit work (i.e., a non-Big Four auditor). We rely on the perception measure of Corten, Steijvers, and Lybaert [14] to measure the willingness to appoint a non-Big Four auditor. This measure contains nine items related to functional perception. The statements can be found in the Appendix A. CEOs of our sample firms were asked to express to what extent they agree with these statements on a 5-point Likert scale. In order to measure the willingness to appoint a non-Big Four auditor, we reversely coded most of the statements. These statements are indicated by 'R'. Based on the average score on these statements the variable WILL_NONBIG4 was created. More specifically, the less useful an external audit is perceived to be by the CEO, the higher the value of the variable WILL_NONBIG4 will be, indicating that the CEO is more willing to appoint a non-Big Four auditor. To validate the perception statements, a factor analysis was performed [38]. The principal component analysis shows that all items load on one factor, which is in line with our expectations. Furthermore, our data was found to be appropriate based on the recommendations of Hair, Black, Babin, Anderson, and Tatham [38]. More specifically, the Bartlett test of sphericity rejects the null hypothesis 'variables are not intercorrelated' with a p -value of 0, the Kaiser–Meyer–Olkin measure (0.932) is considered to be meritorious, and no variables are found with a measure of sample adequacy (MSA) below 0.50.

We proxy a CEO's power to influence the audit appointment decision by measuring his/her 'ownership power'. Ownership provides the manager with the ability to make decisions (e.g., [10,17]). It is acknowledged that CEOs with ownership stakes are likely to be more powerful than CEOs without shareholdings [31]. Although shareholdings are a primary indicator of ownership power, ownership power derives from the CEO's status as founder of the firm as well [19,31,39]. CEOs who are the firm's founder may be powerful by the unique position of implicit control, interactions, and long-term relationships with various stakeholders [19].

In line with prior studies (e.g., [40]) we include both CEO ownership and being a founder as measures of ownership power in our analyses. CEO ownership is defined as the percentage of shares owned by the CEO. The founder variable is a dummy variable coded 1 if the CEO is the founder of the firm and 0 if he/she is not. Both variables are first standardized, and their sum is used to compose the variable CEO_POWER.

Rather than relying on compositional measures and demographic variables such as board size, the percentage of outside directors, CEO duality, etc. to proxy board control effectiveness (e.g., [41,42]), we measure board control effectiveness by board task performance in line with Minichilli et al. [43]. After all, recent board literature argues that demographic variables are conditions rather than determining factors of board behavior such that these proxies do not adequately measure board control effectiveness. Board control effectiveness is rather determined by board processes and the motivation and skills of individual directors [43–47]. In line with Minichilli, Zattoni, and Zona [43], we measure board control effectiveness as board control task performance and therefore include the variable BOARD_CONTROL composed out of seven statements referring to all control tasks of the board. These statements were evaluated on a 5-point Likert scale and can be found in the Appendix A.

3.2.3. Control Variables

Control variables are included in line with other auditor choice studies (e.g., [4,11,14,48]). More specifically, we include the variables DISPERSION, LEVERAGE, SIZE, ROA, and SUBSIDIARY.

To control for the shareholder–manager agency conflicts, we include the variable *DISPERSION*, defined as the natural logarithm of one plus the number of shareholders (e.g., [49]). The variable *LEVERAGE*, defined as the ratio of total debt to total assets, is included to proxy for the agency conflicts between shareholders and debtholders as debtholders might require (additional) assurance from an auditor when issuing debt (e.g., DeFond 1992). *SIZE*, defined as the natural logarithm of total assets (in EUR 1000), controls for firm complexity, which may result in a higher need for the expertise provided by a Big Four auditor (e.g., [49]). *ROA*, defined as the ratio of annual net income to total assets, is included to control for a firm’s profitability. Because more profitable companies can use internally generated funds rather than external financing, they are less likely to appoint larger audit firms [11]. *SUBSIDIARY* is included to control for the possibility that auditor choice in subsidiaries might be driven by audit requirements and the preferences of the parent companies [49]. Finally, *PRODUCTION*, *CONSTRUCTION*, *TRADE*, and *SERVICES* are four dummy variables that account for industry effects [11,50].

3.2.4. Model

The model we use to test our first hypothesis is specified as follows:

$$\text{BIG4} = \beta_0 + \beta_1 \text{WILL_NONBIG4} + \beta_2 \text{CEO_POWER} + \beta_3 \text{WILL_NONBIG4} \times \text{CEO_POWER} + \text{control variables} + \varepsilon \quad (1)$$

The second hypothesis will be tested based on the following model:

$$\begin{aligned} \text{BIG4} = & \beta_0 + \beta_1 \text{WILL_NONBIG4} + \beta_2 \text{CEO_POWER} + \beta_3 \text{WILL_NONBIG4} \times \\ & \text{CEO_POWER} + \beta_4 \text{BOARD_CONTROL} + \beta_5 \text{WILL_NONBIG4} \times \\ & \text{BOARD_CONTROL} + \beta_6 \text{CEO_POWER} \times \text{BOARD_CONTROL} + \\ & \beta_7 \text{WILL_NONBIG4} \times \text{CEO_POWER} \times \text{BOARD_CONTROL} + \text{control variables} + \varepsilon \end{aligned} \quad (2)$$

In order to test the first model, a logit regression is performed. To test our second research model, the *PROCESS* codes of Hayes [22] are used. We use bias-corrected bootstrapping with 10,000 iterations. That way, statistical power problems that result from asymmetric and other non-normal sampling distributions of an indirect effect are avoided. This approach allows us to provide information on the conditional effects of the independent variables at different levels of the moderators.

4. Results

4.1. Descriptive Statistics and Correlations

Table 1 describes the variables included in the analyses. The descriptive statistics of these variables are presented in Table 2. Table 2 contains the minima, maxima, means, and standard deviations. Approximately 33 percent of our sample firms appointed a Big Four auditor. Regarding the explanatory variables, the average value of *WILL_NONBIG4* is found to be 2.66, which indicates that the average perception of a CEO towards auditing is slightly negative (measured on a 5-point Likert scale). The average board control effectiveness amounts to 2.86, measured on a 5-point Likert scale. The descriptives of the control variables are in line with other auditor choice studies that examine a similar context (e.g., [4,11]).

The correlation matrix in Table 3 presents the Pearson (below the diagonal) and the Spearman (above the diagonal) correlations. In line with prior research on auditor choice [14–16], the correlation between *WILL_NONBIG4* and *BIG4* is negative, however not significant in this study. Between *CEO_POWER* and *BIG4*, there is a significant negative correlation indicating that the likelihood of having a Big Four auditor is smaller when the CEO is powerful. In contrast to other auditor choice studies, we find *DISPERSION* and *BIG4* to be significantly negatively correlated, which may indicate that auditor choice is not a direct reflection of the level of agency conflicts in a private firm context. In line with

our expectations and other studies, both SIZE and SUBSIDIARY are positively correlated with BIG 4.

Table 1. Description of variables.

Dependent variable	
BIG4	A dummy variable coded 1 if the firm appointed a Big Four auditor and 0 if it appointed a non-Big Four auditor
Explanatory variables	
WILL_NONBIG4	The average score on the perceived value of external auditing. This has been measured negatively: the higher the score, the more negative the perception (i.e., the higher the willingness to appoint a non-Big Four auditor)
CEO_POWER	A variable including two standardized items: whether the CEO is the founder and his/her shareholdings
BOARD_CONTROL	The average score on the board control tasks, where a higher score means a stronger control role of the board of directors
Control variables	
DISPERSION	The natural logarithm of one plus the number of shareholders
LEVERAGE	The ratio of total debt to total assets
SIZE	The natural logarithm of total assets
ROA	The ratio of annual net income to total assets indicated as a percentage
SUBSIDIARY	A dummy variable coded 1 if the firm is part of a group as a subsidiary
PRODUCTION	A dummy variable that controls for industry
CONSTRUCTION	A dummy variable that controls for industry
TRADE	A dummy variable that controls for industry
SERVICES	A dummy variable that controls for industry

Table 2. Descriptive statistics.

Continuous Variables	Min.	Max.	Mean	s.d.
WILL_NONBIG4	1	5	2.66	0.95
CEO_POWER	−0.60	2.22	0.05	0.85
BOARD_CONTROL	1	5	2.86	0.98
DISPERSION	0.69	3.47	1.27	0.52
LEVERAGE	0	0.99	0.63	0.22
SIZE	6.92	14.44	9.50	1.09
ROA	−68.37	58.08	6.41	10.38
Dichotomous Variables	Sum	Proportion		
BIG4	103	0.33		
SUBSIDIARY	147	0.47		
PRODUCTION	106	0.34		
CONSTRUCTION	40	0.12		
TRADE	107	0.34		
SERVICES	63	0.20		

n = 316.

As the correlations between the explanatory and control variables, among the control variables, and among the explanatory variables do not exceed the critical value of 0.8, multicollinearity seems not to be an issue. This is also supported by the variance inflation factors, which are all lower than the maximum threshold of 10.

4.2. Regression Results

In Table 4, we present the results of the logistic regression analysis. For each model, the beta coefficients and the corrected standard errors (between brackets) are reported. All models are found to be significant ($p < 0.001$). The Nagelkerke pseudo R^2 values vary between 0.322 and 0.377.

Table 3. Correlations.

	BIG4	WILL_NONBIG4	CEO_POWER	BOARD_CONTROL	DISPERSION	LEVERAGE	SIZE	ROA	SUBSIDIARY
BIG4	1	−0.092	−0.372 **	0.024	−0.218 **	−0.062	0.195 **	0.017	0.380 **
WILL_NONBIG4	−0.101	1	0.097	−0.129 *	0.027	−0.006	−0.185 **	−0.110	−0.075
CEO_POWER	−0.294 **	0.094	1	0.051	0.242 **	0.021	−0.267 **	−0.044	−0.498 **
BOARD_CONTROL	0.015	−0.133 *	0.050	1	0.059	0.094	−0.008	0.033	−0.030
DISPERSION	−0.158 **	−0.015	0.060	0.013	1	−0.094	−0.041	0.068	−0.386 **
LEV	−0.058	−0.042	0.035	0.116 *	−0.045	1	−0.067	−0.230 **	0.006
SIZE	0.254 **	−0.193 **	−0.224 **	0.015	−0.056	−0.060	1	0.013	0.057
ROA	−0.002	−0.048	−0.038	0.068	0.050	−0.039	−0.094	1	0.044
SUBSIDIARY	0.380 **	−0.093	−0.370 **	−0.032	−0.335 **	−0.003	0.055	0.046	1

n = 316; *, **, indicate significance at the 5% and 1% levels, respectively (two-tailed). The Pearson correlations are reported below the diagonal, the Spearman correlations above the diagonal; Due to space constraints, the correlations with the industry dummies PRODUCTION, CONSTRUCTION, TRADE, and SERVICES are not reported, but these are available from the authors on request.

Table 4. Regression results.

Model	1	2	3	4
<i>Dependent variable:</i>	BIG4	BIG4	BIG4	BIG4
<i>Explanatory variables:</i>				
WILL_NONBIG4		−0.0552 (0.1527)	−0.0446 (0.1562)	−0.9087 * (0.5590)
CEO_POWER			−0.4065 (0.5833)	6.3122 *** (2.0633)
BOARD_CONTROL				−0.8067 (0.5134)
<i>Interaction terms:</i>				
WILL_NONBIG4 × CEO_POWER			−0.0497 (0.2073)	−2.2740 *** (0.8064)
WILL_NONBIG4 × BOARD_CONTROL				0.3118 * (0.1818)
CEO_POWER × BOARD_CONTROL				−2.4209 *** (0.7299)
WILL_NONBIG4 × CEO_POWER × BOARD_CONTROL				0.7833 *** (0.2684)
<i>Control variables:</i>				
DISPERSION	−0.1280 (0.2390)	−0.1305 (0.2924)	−0.1790 (0.2992)	−0.2465 (0.3088)
LEVERAGE	−0.6540 (0.6280)	−0.6639 (0.6293)	−0.6709 (0.6378)	−0.6596 (0.6615)
SIZE	0.5140 *** (0.1280)	0.5055 *** (0.1301)	0.4491 *** (0.1327)	0.4776 *** (0.1386)
ROA	0.0013 (0.0125)	0.0010 (0.0126)	0.0007 (0.0126)	0.0003 (0.0130)
SUBSIDIARY	1.7974 *** (0.3094)	1.7897 *** (0.3101)	1.5430 *** (0.3283)	1.5656 *** (0.3443)
PRODUCTION	0.2106 (0.3732)	0.2192 (0.3741)	0.1957 (0.3785)	0.4072 (0.3967)
CONSTRUCTION	−0.4115 (0.5009)	−0.4120 (0.5014)	−0.4358 (0.5148)	−0.3796 (0.5248)
TRADE	−0.8799 ** (0.3894)	−0.8649 ** (0.3916)	−0.9392 ** (0.3981)	−0.8143 ** (0.4118)
Intercept	−5.8302 *** (1.4430)	−5.5950 *** (1.5790)	−4.8958 *** (1.6109)	−3.0897 (2.1741)
Chi-square	78.771 ***	78.902 ***	86.381 ***	99.535 ***
Nagelkerke R ²	0.322	0.308	0.334	0.377

n = 316; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively (two-tailed).

Model 1 reports the influence of the control variables that are traditionally taken into account when examining auditor choice. In line with former auditor choice studies

(e.g., [3,4]), the coefficient of SIZE is found to be significantly positive, indicating that large firms are more likely to appoint a Big Four auditor. Moreover, in line with prior literature as well, SUBSIDIARY is found to be significantly positive, which indicates that subsidiaries are often required by their parent companies to appoint a Big Four auditor. Finally, the coefficient of TRADE is significantly negative, indicating that firms operating in the trade industry are less likely to have a Big Four auditor compared to firms operating in services. While the level of shareholder–debtholder agency conflicts is often considered to be an important driver of auditor choice as well, LEVERAGE is found to be insignificant. Since all firms in our sample were required to hire an auditor, this seems to indicate that debtholders might value audited financial statements when issuing debt but do not necessarily make a distinction regarding who (i.e., a Big Four versus a non-Big Four auditor) audited these statements.

In model 2 the willingness of the CEO to appoint a non-Big Four auditor is added. The beta coefficients of the control variables remain stable compared to the benchmark model 1. While the coefficient of WILL_NONBIG4 is found to be negative, it is not statistically significant. This finding could be assigned to the fact that the average ability (which is implicitly included when not controlling for ability directly) in our sample may be lower than the average ability in the studies of Collis, Jarvis, and Skerratt [15] and Niemi, Kinnunen, Ojala, and Troberg [16]. As they studied voluntary auditor choice, their sample firms are generally smaller and are more likely to have a powerful owner-manager who is able to push his/her will through regarding auditor choice. With an average amount of total assets of EUR 13.36 million (versus EUR 2.09 million in the study of Collis, Jarvis, and Skerratt [15]), the firms in our sample are much larger, and the average ability may therefore be lower in our sample resulting in no significant direct influence of willingness on auditor choice.

The insignificant result of willingness, therefore, also confirms our statement that only taking willingness into account gives a too one-sided view of a CEO's influence on auditor choice. Not taking into account ability might therefore cause an omitted variable bias in model 2. Managers who are willing to have a non-Big Four auditor also need the ability to actually appoint a non-Big Four auditor.

We, therefore, add CEO_POWER in the third model as well as the interaction variable WILL_NONBIG4 \times CEO_POWER. However, Hypothesis H1 cannot be confirmed as the interaction of WILL_NONBIG4 \times CEO_POWER is not statistically significant. This is possibly due to the fact that by only taking into account CEO power, we neglect the fact that the exertion of this power may be influenced by the board of directors that has the responsibility of controlling CEO behavior.

Model 4, therefore, includes the variable BOARD_CONTROL, measuring board control effectiveness, together with the interaction variables. When taking into account BOARD_CONTROL and thus a CEO's actual ability, we do find a significant negative coefficient for WILL_NONBIG4 \times CEO_POWER in line with our first hypothesis H1. However, the most important result is the significant regression coefficient of WILL_NONBIG4 \times CEO_POWER \times BOARD_CONTROL ($p < 0.001$), meaning that there is evidence of a moderated moderation effect between a CEO's willingness, his/her power, and the control effectiveness of the board of directors.

4.3. Graphical Interpretation

To get a more detailed understanding of the moderated moderation effect of willingness, power, and the control effectiveness of the board of directors, we investigate the effect of WILL_NONBIG4 on BIG4 when CEO_POWER changes while keeping the control effectiveness of the board of directors fixed. We graphically present five situations starting with a very weak control effectiveness (BOARD_CONTROL = 1 in Figure 2A) to a very strong control effectiveness of the board (BOARD_CONTROL = 5 in Figure 2E).

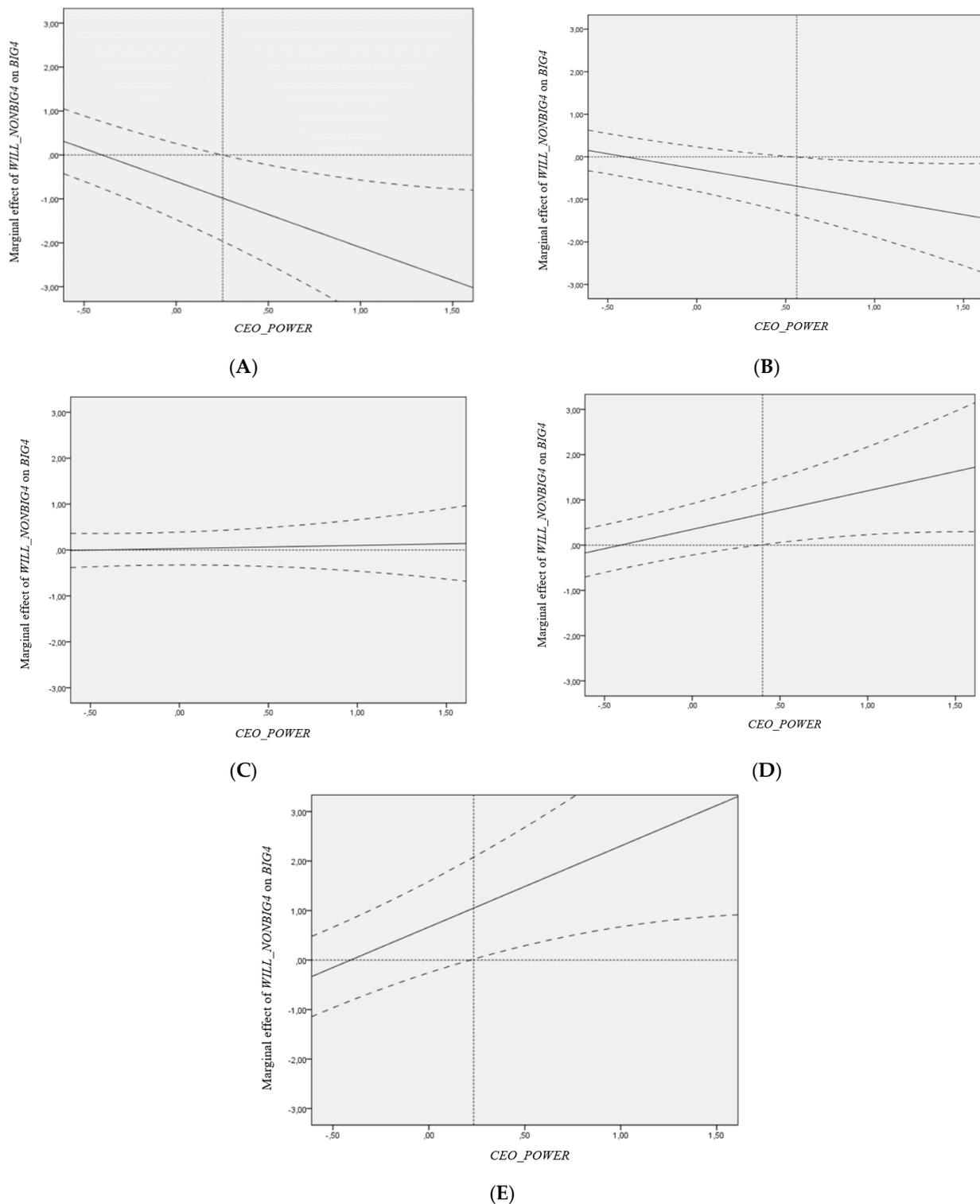


Figure 2. (A) Marginal effect of the willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor when power changes (Board Control Effectiveness = 1 (Very Low Level)). (B) Marginal effect of the willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor when power changes (Board Control Effectiveness = 2 (Low Level)). (C) Marginal effect of the willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor when power changes (Board Control Effectiveness = 3 (Moderate Level)). (D) Marginal effect of the willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor when power changes (Board Control Effectiveness = 4 (High Level)). (E) Marginal effect of the willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor when power changes (Board Control Effectiveness = 5 (Very High Level)).

Figure 2A shows that when the board control effectiveness is very weak ($\text{BOARD_CONTROL} = 1$), the marginal effect of the willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor is significantly negative when CEO power is moderate to high (as indicated by the dashed vertical line, after which both the upper and lower bounds of the confidence interval are below the zero line). More specifically, when the board control effectiveness is weak, it is more likely that CEOs who are willing to appoint a non-Big Four auditor are able to exert their will when having moderate to high power. Figure 2B depicts the situation when board control effectiveness is higher but still weak ($\text{BOARD_CONTROL} = 2$). Notable is a flatter slope of the graph compared to Figure 2A, indicating that the marginal effect of the willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor is less negative. Consequently, in the significant region, the marginal effect of CEO willingness on the appointment of a Big Four auditor is weaker compared to Figure 2A. Furthermore, as indicated by the vertical dashed line, which shifted to the right, a CEO needs more power to be able to exert his/her will and influence the audit appointment decision. When board control effectiveness is moderate ($\text{BOARD_CONTROL} = 3$), which is shown in Figure 2C, there is no significant effect. This could suggest that even if the CEO is powerful, the board is able to limit this power in a way the CEO will not be able to exert his/her will. In the situation of a strong controlling board of directors ($\text{BOARD_CONTROL} = 4$), the marginal effect of CEO willingness to appoint a non-Big Four auditor on the appointment of a Big Four auditor when CEO power changes even turns out to be positive. More specifically, even though a CEO has the willingness and the power to appoint a non-Big Four auditor, the board of directors, which is intensively supervising the CEO, will actually lead to a higher likelihood of appointing a Big Four auditor. This effect even becomes stronger (the slope becomes steeper) when the control effectiveness of the board of directors further increases ($\text{BOARD_CONTROL} = 5$ in Figure 2E). This result might suggest that a board may consider it suspicious when the CEO is willing to appoint a non-Big Four auditor, especially when the CEO is powerful. The choice of a CEO to hire a non-Big Four auditor may be based on economic arguments (e.g., cheaper, less time investment, etc.) but may also be the result of having something to hide (e.g., earnings management, fraud, etc.). The board may consider this second possibility to become more likely if the CEO becomes more powerful. More specifically, CEO power increases the risk of CEO entrenchment. As CEOs become entrenched, there is a higher risk of using their power to pursue their own interests at the expense of the firm's shareholders [51]. As a result, a strong controlling board of directors will be more concerned and vigilant when CEO power is high [52]. Therefore, the more power a CEO has, the more suspicious the board will consider a CEO's preference to appoint a non-Big Four auditor, leading to a stronger desire by the board to appoint a Big Four auditor.

In order to complete the analysis and formulate a final conclusion about the moderated moderation, the Johnson and Neyman technique was used [22]. Figure 3 graphically presents the conditional indirect effect as well as the upper- and lower-level 95 percent confidence interval. The marginal effect of the willingness–power interaction on auditor choice is significant when both upper and lower bounds of the confidence interval are above (or below) the zero line. The figure shows that the combination of willingness and power has a significant negative effect on auditor choice when the level of board control effectiveness is below 2.19. In this region with low board control effectiveness, firms with powerful CEOs who are willing to appoint a non-Big Four auditor are less likely to appoint a Big Four auditor. We notice that approximately 28 percent of our sample firms are situated in this region. Furthermore, the combination of willingness and power appears to have a significant and positive effect on the appointment of a Big Four auditor when board control effectiveness is above 3.66. This corresponds to approximately 23 percent of the firms in our sample.

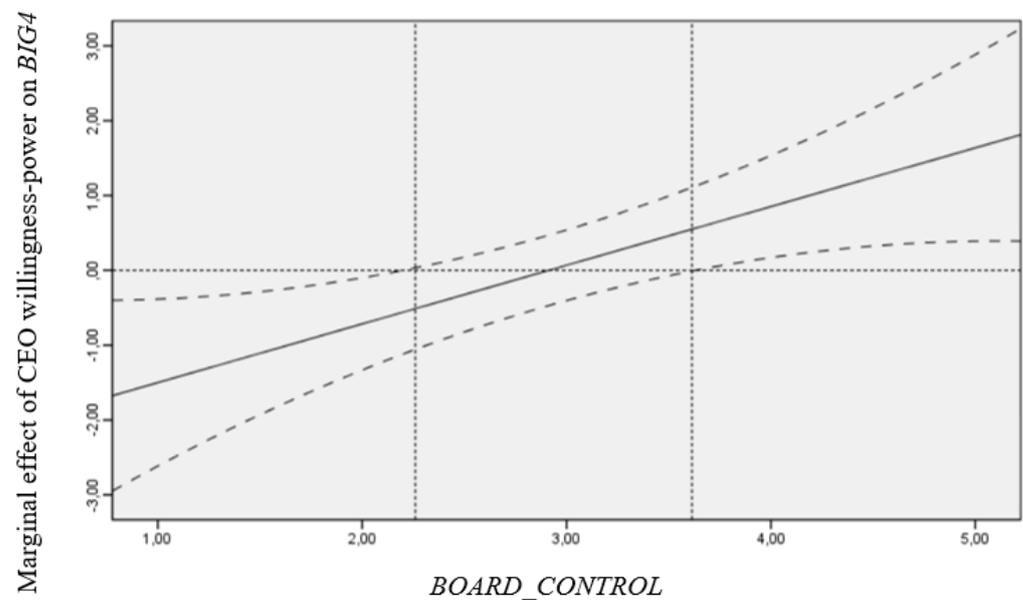


Figure 3. Marginal effect of the willingness-power interaction on the appointment of a Big Four auditor when board effectiveness changes.

4.4. Robustness Analyses

Additional tests were conducted in order to test the robustness of our findings. At first, we conducted a robustness test on the variable WILL_NONBIG4. More specifically, we measured the CEO's willingness to appoint a non-Big Four auditor alternatively by replacing the average score on the perception statements by the score on the statement: 'In case your company would no longer be required to appoint an auditor, would you choose for a voluntary audit?'. The results, which are completely in line with our main results, are reported in the first column of Table 5 (model 5).

Furthermore, in order to examine the robustness of the moderating effect of the board of directors, we used a different measure to proxy the control effectiveness. The alternative measure consists of the index of Westphal [53]. This index measures board control based on three statements all referring to the control tasks of the board: (i) 'To what extent does the board monitor top management strategic decision making?', (ii) 'To what extent does the board formally evaluate your performance?', and (iii) 'To what extent does the board defer to your judgment on final strategic decisions?' (p. 14). Statements were evaluated on a 5-point Likert scale. The results are shown in model 6 in Table 5 and remain completely in line with our main results.

Finally, we ran our regressions with alternative proxies for the control variables. More specifically, in line with Niemi, Kinnunen, Ojala, and Troberg [16], we proxied the control variable SIZE by the logarithm of turnover instead of the logarithm of total assets. Furthermore, we used management ownership, defined as the percentage of shares owned by management, to measure the level of agency conflicts between owners and managers instead of DISPERSION [11]. The results (not reported) remain completely in line with our main results.

Table 5. Robustness analyses.

Model	5	6
<i>Dependent variable:</i>	BIG4	BIG4
<i>Explanatory variables:</i>		
WILL_NONBIG4	−0.7027 * (0.4209)	0.1260 (0.5607)
CEO_POWER	5.5391 *** (1.7007)	3.9192 * (2.0169)
BOARD_CONTROL	−0.6702 (0.4421)	0.4077 (0.4652)
<i>Interaction terms:</i>		
WILL_NONBIG4 × CEO_POWER	−1.7718 *** (0.6250)	−1.7148 ** (0.8069)
WILL_NONBIG4 × BOARD_CONTROL	0.2366 * (0.1374)	−0.0719 (0.1666)
CEO_POWER × BOARD_CONTROL	−2.2950 *** (0.6395)	−1.3972 ** (0.6171)
WILL_NONBIG4 × CEO_POWER × BOARD_CONTROL	0.6211 *** (0.1989)	0.5331 ** (0.2387)
<i>Control variables:</i>		
DISPERSION	−0.2409 (0.3307)	−0.1428 (0.3122)
LEVERAGE	−0.4589 (0.7143)	−0.9932 (0.6841)
SIZE	0.4667 *** (0.1521)	0.4901 *** (0.1437)
ROA	−0.0009 (0.0135)	0.0039 (0.0132)
SUBSIDIARY	1.6596 *** (0.3690)	1.6743 *** (0.3512)
PRODUCTION	0.2605 (0.4200)	0.3076 (0.3996)
CONSTRUCTION	−0.4976 (0.5771)	−0.2876 (0.5360)
TRADE	−0.7734 * (0.4435)	−0.9245 ** (0.4255)
Intercept	−3.6114 * (2.0548)	−6.5045 *** (2.2710)
Chi-square	103.999 ***	100.447 ***
Nagelkerke R ²	0.422	0.388

n = 316; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively (two-tailed).

5. Conclusions

In this paper, we studied the influence of the CEO on auditor choice in the Belgian private firm context. Even though auditing serves as a monitoring mechanism towards management, recent studies indicate that management is often the driving force behind auditor appointments and terminations [7]. This is worrying since management might appoint the (type of) auditor which he/she prefers, irrespective of what the firm would most benefit from. For example, when management perceives an audit as less useful, it is more likely that management chooses a non-Big Four auditor, who is less expensive and is perceived to restrict the amount of audit work compared to Big Four audit firms. However, the firm's stakeholders may benefit from hiring a Big Four auditor, for example, to obtain a higher level of assurance in order to be better able to monitor management.

While the few studies that empirically examine this management influence only focus on the willingness of the CEO to influence auditor choice, we investigate to what extent ability strengthens the influence of the CEO's willingness to appoint a non-Big Four auditor. We consider ability to arise from CEO power unless it is constrained by the control effectiveness of the board of directors.

Our findings show that CEOs who are willing to appoint a non-Big Four auditor are more able to exert their will if they have more power and board control effectiveness is low. On the other hand, when board control effectiveness is high, results indicate that even though a CEO has the willingness and power to appoint a non-Big Four auditor, the board of directors will ensure that a Big Four auditor is appointed.

This paper provides several theoretical and practical contributions. First, this paper answers the calls of Carcello, Hermanson, and Ye [12] and Cohen, Krishnamoorthy, and Wright [13] to execute more quantitative studies that take into account the influence of management on the audit process. Moreover, to the extent of our knowledge, this study is the first to consider the combination of willingness and ability in an audit context as the few exceptions that do examine management influence on auditor choice focus solely on the willingness of management. In general, our findings show that vigilance is required regarding the influence of management on the audit process as this management influence might lead to a sub-optimal auditor choice and audit quality for the firm and its stakeholders, causing a.o. potential monitoring deficiencies. Furthermore, these findings show that ability is not only determined by managerial power but also by the board of directors. More specifically, the ability of the CEO to push through his/her will regarding auditor choice depends on the control effectiveness of the board, emphasizing the importance of a well-functioning board of directors.

Our study has some limitations, which also provide interesting avenues for future research. First of all, although we analyze perceptions (i.e., willingness) towards auditing, we actually have no insight into why a CEO has a certain perception towards auditing. Taking a step back and analyzing the drivers of perception would therefore be an interesting path for future research.

Second, we examine the willingness of the CEO to influence auditor choice on firm-level by investigating whether a Big Four auditor is appointed instead of a non-Big Four auditor. We acknowledge that there might exist differentiation within Big Four firms or within non-Big Four firms. Within-group differentiation might arise from industry specialization (e.g., [54]), office size (e.g., [55]) and second-tier audit firms (e.g., [56]). As a result, it might be interesting to examine whether the CEO is willing to appoint a specific type of auditor rather than focusing on the audit firm as a homogeneous group. Shifting the research focus from the firm to the individual level is, therefore, an opportunity for future research as well.

Third, the main argumentation of this study was based on the assumption that the less useful a CEO considers an audit, the more willing he/she will be to appoint a non-Big Four auditor as this would cost-effectively be the most logical choice. However, next to cost issues, alternative explanations might exist for why CEOs that consider an audit as less useful prefer a non-Big Four auditor, and this could therefore also be considered an interesting path for future research.

Fourth, in order to measure the control effectiveness of the board, we relied on a single respondent (the CEO), who provided his/her perception of how effective the board is. While objective data regarding board control is very difficult to obtain and our method is in line with several other studies in the corporate governance literature (e.g., Pearce and Zahra, 1991; Zahra, 1996; Zahra, Neubaum and Huse, 2000; in: [43]), this limitation should be accounted for when interpreting this study's results.

Fifth, our study is performed in the context of Belgian private firms. One should therefore be careful with generalizing the results. In an Anglo-American context, for example, shareholders are better protected [57], which may influence the CEO's ability to influence the audit appointment decision. Furthermore, Belgian private firms are known to be rather small compared to those in the Anglo-American context. As size may influence the governance structure of a firm, it might influence auditor choice and the audit process as well.

Finally, by investigating the influence of the CEO's willingness and ability on auditor choice, we are not able to conclude whether the actual audit quality is influenced as well.

One could imagine that a CEO who is willing to appoint a non-Big Four auditor might also be less cooperative during the audit, impeding the auditor from performing a rigorous audit and resulting in lower audit quality. Examining the willingness and ability of the CEO to influence the audit process and the actual audit quality should therefore be considered as a very interesting avenue for future research as well.

Author Contributions: Conceptualization, M.C., T.S., N.L. and C.C.; methodology, M.C., T.S. and C.C.; formal analysis, M.C., T.S. and C.C.; investigation, M.C., T.S. and N.L.; data curation, M.C.; writing—original draft preparation, M.C., T.S., N.L. and C.C.; writing—review and editing, M.C., T.S. and N.L.; visualization, C.C.; supervision, M.C., T.S. and N.L. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Ethical review and approval were waived for this study since no (sensitive) personal data and information was processed.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Acknowledgments: We would like to thank Robert Knechel, Anna Gold, and Stuart Turley for their helpful comments during the round table session at the EARNet Symposium held in Leuven, Belgium (2017). Furthermore, we would like to thank Simon Dekeyser for his constructive comments during the Research Day in Accounting held in Antwerp, Belgium (2018).

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Statements regarding the perception of the CEO towards auditing to measure WILL_NONBIG4:

1. An external audit increases the quality of the financial statements of our company. (R)
2. An external audit has a positive influence on the financial performance of our company. (R)
3. An external audit strengthens the corporate governance of our company. (R)
4. An external audit provides us with useful advice. (R)
5. An external audit improves the efficiency and reliability of our business processes/ internal control. (R)
6. I consider an external audit as a waste of time.
7. An external audit reassures me about the financial reporting of our results. (R)
8. An external audit provides no added value to an external accountant.
9. An external audit increases my personal credibility towards the board of directors and the shareholders. (R)

Statements regarding the control role of the board of directors to measure BOARD_CONTROL:

1. The board is actively involved in monitoring that all internal behaviors are adequately controlled
2. The board is actively involved in defining behavioral guidelines for divisional and functional managers
3. The board is actively involved in supervising the CEO
4. The board controls that the activities are well organized
5. The board develops plan and budgets
6. The board is kept informed on the financial position of the company
7. The board actively monitors and evaluates strategic decisions

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