

**THE IMPACT OF AUDITOR SELECTION REGIME AND  
AUDIT COMMITTEE AUTONOMY ON INVESTMENT DECISIONS**

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## **THE IMPACT OF AUDITOR SELECTION REGIME AND AUDIT COMMITTEE AUTONOMY ON INVESTMENT DECISIONS**

**ABSTRACT:** After the recent financial crisis and a number of corporate failures, regulatory bodies have proposed and, in some cases, enacted mandatory audit firm rotation or mandatory periodical audit firm tendering to enhance auditor independence and resulting audit quality. However, there is limited empirical evidence of the efficacy of such measures. Further, since the audit committee can have significant influence in oversight of the audit process and financial reporting, their effectiveness likely depends on the strength of corporate governance within a company, especially the *de facto* autonomy of the audit committee from management in selecting and appointing the audit firm, potentially creating a perceived auditor self-interest threat. This study examines the impact of auditor selection regime (rotation, tendering, and the current regime) and the autonomy of the audit committee (high vs. low) on investors' investment decisions. We hypothesize an interaction between auditor selection regime and audit committee autonomy on the likelihood of investing and a main effect of audit committee autonomy. Specifically, we expect the highest level of investment when there is tendering or rotation and high audit committee autonomy, and the lowest level of investment when there is tendering and a low audit committee autonomy. We examine these issues in an experiment involving 118 investment professionals, where we manipulate auditor selection regime and audit committee autonomy. The results suggest that given a high autonomy audit committee, rotation and tendering both lead to the highest investment level, as predicted. However, given low audit committee autonomy, all auditor selection regimes result in an equally low likelihood of investing. Further, we obtain a significant positive main effect of audit committee autonomy but find that this effect holds for rotation and tendering but not for the current regime. Collectively, the findings underscore that auditor selection regimes should not be viewed in isolation, but as part of the overall monitoring of financial reporting, which includes elements of corporate governance.

# **THE IMPACT OF AUDITOR SELECTION REGIME AND AUDIT COMMITTEE AUTONOMY ON INVESTMENT DECISIONS**

## **1. INTRODUCTION**

Following the recent financial crisis there has been extensive debate on actions to improve audit quality, foremost of which are ways to strengthen auditor independence. Proposals designed to mitigate threats to independence have been considered by the European Commission (2013) as well as by the PCAOB (2011) in the United States. These proposals include potential restrictions of the services that can be provided by the audit firm as well as changing the auditor selection regime. With regard to the latter, policy setting bodies have identified two primary approaches to increase audit quality and re-establish investor confidence in financial information: audit firm rotation; and audit firm tendering.<sup>1</sup>

The objective of these measures is to increase auditor independence by restricting the length of auditor tenure to prevent the auditor from becoming overly familiar with the client, which is a threat to auditor independence (e.g., IESBA Code of Ethics 2013). Following a provisional agreement reached by the European Commission on 17 December 2013, audit firms in the EU will be required to rotate after an engagement period of 10 years.<sup>2,3</sup> In the

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<sup>1</sup> Tendering entails periodically putting the audit engagement up for competitive proposals by different audit firms whereby the current firm may continue in subsequent years if selected. In contrast, rotation takes place when the current audit firm is periodically replaced by another firm and a tender for appointment is solicited among other audit firms only. Both approaches differ from the current prevailing regime where it is up to the client company and the audit firm to decide whether or not and for how long to continue their relationship.

<sup>2</sup> The engagement period can be extended with 10 additional years if new tenders are issued, and with up to 14 additional years in the case of joint audits (European Parliament 2014).

<sup>3</sup> The European Parliament adopted the provisional agreement on the proposal for Directive amendments in a plenary vote on April 3, 2014 and the Member States in the Council are expected to formally adopt the texts by mid-April (European Commission 2014a). Mandatory rotation will likely apply in all EU member states in 2016. Several EU member states have already unilaterally introduced regulation that alters the auditor selection regime. For instance, an eight-year mandatory auditor rotation has become law in the Netherlands, effective in 2016 (Section 24 of Wta; The Dutch Audit Firms Supervision Act 2006).

words of the European Commission (2014b), “Mandatory audit firm rotation will help reduce excessive familiarity between the statutory auditor and its clients, limit the risks of carrying over repeated inaccuracies, and encourage fresh thinking, thus strengthening the conditions for genuine professional skepticism.”

Further, the UK is the first country to the authors’ knowledge that is introducing mandatory audit firm tendering where the 350 largest companies will be required to put their statutory audit out for tender at least every 10 years. While the background to this proposal is primarily related to enhanced market competition, secondary reference is also made to improvements of auditor independence (UK Competition Commission 2013).

The effectiveness and impact of the proposed auditor selection regimes on auditor independence are currently unknown, since prior research on the effect of each regime is limited. Section 290 of the IESBA Code of Ethics (2013) underlines the need for an auditor to be both independent in mind (independence in fact) as well as in appearance. The focus of the current study is on the latter. Independence of the auditor is essential for the reliability and credibility of the audit report (Antle 1984). By definition, financial statement users can only judge an auditor’s independence in appearance and must gauge the auditor’s factual independence based on that perception. Source Credibility Theory suggests that the claims made by a source are viewed as credible when the source itself is perceived to be competent and independent (e.g., Birnbaum and Stegner 1979). Consequently, the perceived value of an audit report is largely dependent on the auditor’s independence in appearance. Hence, an audit report that is viewed as credible and reliable will lead to lower information risk of financial statements and hence more efficient resource allocations in the capital markets, e.g., investment decisions and cost of capital.

The focus of our study is on the final year before a potential auditor change. Hence, we hold audit firm tenure constant and examine the effects that an upcoming rotation or

tender have on investors' investment decisions, vis-à-vis the current regime, where the incumbent audit firm is likely to be reappointed. While mandatory upcoming rotation and tendering potentially alleviate financial statement users' independence concerns regarding *familiarity threats* (e.g., European Commission 2014b), we suggest that there are circumstances under which such selection regimes could trigger another kind of (perceived) independence threat. That is, mandatory tendering (and to some degree the current regime) may negatively impact investor perceptions of the auditor's motivations to please management in order to retain the client if there are contentious reporting issues at hand, i.e., a *self-interest threat*, while mandatory rotation might be sufficiently powerful to reduce such concerns. Since it is the audit committee's formal responsibility to appoint the auditor, we posit that these effects strongly depend on the degree of audit committee autonomy from management in selecting the upcoming auditor. If management has significant influence over the audit committee's selection decision (i.e., an audit committee with low autonomy), then the auditor is likely to be viewed by investors as motivated to curry the favor of management to be reappointed.

Interestingly, after the PCAOB published its concept release on auditor independence and audit firm rotation (PCAOB 2011), the majority of comments received opposed mandatory audit firm rotation, and instead, the influence of corporate governance in general and the role of the audit committee in particular was emphasized as a sufficient measure to ensure auditor independence. By the time the final public meeting on the concept release was held by the PCAOB on October 18, 2012, PCAOB board members specifically mentioned the importance of the audit committee for auditor independence (PCAOB 2012). Indeed, the independence and competence of the audit committee is generally considered to be an important factor that can influence auditor independence (Zhang, Zhou, and Zhou 2007).

Over the past 10 to 15 years the audit committee has been delegated the authority for overseeing financial reporting and the audit process to protect shareholder interests (e.g., the Sarbanes-Oxley Act of 2002). However, previous research (e.g., Cohen et al. 2010; Dhaliwal et al. 2014; Fiolleau et al. 2013) reports that the influence of management over the audit committee in the auditor selection decision varies widely, from situations in which the audit committee is both formally and informally autonomous to situations where, *de facto*, management essentially makes the decision.<sup>4</sup> In the former setting, investors are expected to have greater assurance that the auditor has no incentives to please management to retain the client, while in the latter management may use its influence to retain an auditor that is amenable to its reporting preferences.

Finally, it is likely that investors see a lack of autonomy for the audit committee in the auditor selection decision as evidence of a broader “halo” effect (e.g., Murphy et al. 1993) in the committee’s abilities to independently oversee financial reporting. The purpose of the current study is to examine the joint effects of the audit committee autonomy from management regarding the auditor appointment decision and the auditor selection regime on investors’ investment decisions.

We examine investment decisions given three different auditor selection regimes (rotation, tendering, current regime) and two different levels of audit committee autonomy over the auditor appointment (low autonomy, high autonomy). We predict that rotation and tendering will lead to the highest investment likelihood, but only when the audit committee has high autonomy. We expect the lowest likelihood of investing when there is an audit

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<sup>4</sup> In this study, even though information about the informal autonomy of the audit committee is typically not disclosed, we assume that well-informed professional investors, who are considering a significant equity investment in the company, are aware of the status quo. Further, as will be discussed, the results may underscore the need for regulatory reforms to ensure audit committee autonomy necessary to enhance investor confidence of the effectiveness of mandatory audit firm rotation and tendering regimes.

committee with low autonomy combined with mandatory tendering, since in this setting investors are likely to worry that the auditor may be heavily motivated to please management with the appointment decision approaching, thus, abrogating the potential positive effects of this auditor selection regime. Finally, we predict an overall positive effect of audit committee autonomy on the likelihood of investing.

We investigate these issues with an experiment involving 118 experienced investment professionals. The results indicate a significant interaction between our two independent variables. Specifically, we find, as expected, that given a high autonomy audit committee, rotation and tendering both lead to the highest investment level. However, when there is a low autonomy audit committee, all auditor selection regimes result in an equally low likelihood of investing, highlighting the importance of corporate governance to investors. The observed interaction effect is partially mediated by our measure of perceived auditor independence. Further, we obtain a significant positive main effect of audit committee autonomy but find that this effect holds for rotation and tendering but not for the current regime.

Overall, this is the first study to jointly consider auditor selection regime and corporate governance. That is, even if an auditor is selected through a tendering or rotation process, investors are posited to view the effectiveness of such measures as contingent upon the support of an autonomous audit committee. Thus, the auditor selection regimes cannot be viewed in isolation of the corporate governance setting in which such regimes will be put into place. Importantly, we also shed light on some of the potential consequences of the auditor selection regime of tendering which is a viable regime that has not been examined by prior research despite its upcoming implementation in the UK.

The remainder of this paper is divided into four sections. The next section contains a discussion of the prior literature and the development of the research hypotheses. The following sections provide a description of the method, followed by presentation of the

results. The final section is then devoted to a summary of the major findings and their implications for practice and future research.

## **2. PRIOR LITERATURE AND RESEARCH HYPOTHESES**

### **Source Credibility Theory**

The value of the auditor's report is that it adds credibility to the financial statements that are relied upon by the capital markets to make investment decisions. Thus, investors' perceptions of audit quality are vital (PCAOB 2012). In this paper, we focus on investment decisions. The primary objective of an audit is to reduce the information risks of investors in evaluating the performance and potential of a company by providing an independent opinion as to whether the financial statements present a true and fair view of the financial status and performance of the company. Investor information risk is dependent upon faith in the credibility of the auditor, which, as indicated by Source Credibility Theory (e.g., Birnbaum and Mellers 1983), is affected by source bias (or objectivity or independence).<sup>5</sup> Thus, perceptions of auditor objectivity or independence are critical, as recognized in ethical standards. As a result, if the auditor is perceived as more (less) independent, the audit opinion will likely be viewed as having a higher (lower) level of credibility, which in turn is expected to lead to a lower (higher) information risk and, hence, higher (lower) likelihood of investment.

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<sup>5</sup> More specifically, Source Credibility Theory (Birnbaum and Stegner 1979) indicates that credibility is dependent upon source bias (or objectivity or independence), source competence, and judge bias. Research also finds that the credibility of a source depends on its expertise, attractiveness and trustworthiness (Dholakia and Sternthal 1977; Harmon and Coney 1982; Wiener and Mowen 1986; Ohanian 1990). In the same vein, recent theory on corporate credibility (e.g., Newall and Goldsmith 2001) focuses solely on expertise and trustworthiness. Our focus is on the first element: source bias. Therefore, we hold auditor competence constant and also statistically control for auditor competence perceptions in robustness analyses. Further, unlike other settings such as political affiliation of the decision maker or judge, the influence of a potential investor bias in assessing auditor independence or making an investment recommendation is outside the focus of the current study. Accordingly, we do not manipulate investor bias or motive, and such effects are randomized.



A clean opinion by an auditor is less credible if the auditor has something to gain from this opinion, which is consistent with Source Credibility Theory that states sources who have self-interested reasons for making a claim will be discounted (Kelly 1973). In the following sections, we use Source Credibility Theory to argue that auditor selection regime and audit committee autonomy interact in their effect on investment decisions.

### **Auditor Selection Regimes**

In most jurisdictions legislation does not currently restrict the number of years that an audit firm may be appointed by a client. Hence, in the current auditor selection regime, it is typically up to the company being audited and the audit firm in charge to decide when to end the ongoing relationship and appoint a new audit firm. Despite upcoming changes in legislation, as discussed, we label this situation the ‘current regime’. The main concern voiced by regulators and standard setters (e.g., European Commission, PCAOB) about the current regime is that the frequently lengthy tenure of the auditor may potentially decrease auditor independence, and hence audit quality, due to an overly close relationship between the auditor and the client. Potential threats frequently mentioned are excessive familiarity with the client and the threat of routine, possibly causing a decrease in the attention to detail and even (unconscious) incentives to please client management (e.g., Ewelt-Knauer et al. 2013; Ruiz-Barbadillo et al. 2009). A large body of research examines the impact of audit firm tenure on audit quality. Perhaps surprisingly, the majority of studies suggest an overall *positive* relationship between tenure and audit quality (e.g., Carcello and Neal 2000; Geiger and Raghunandan 2002), which overall does not support regulators’ and standard setters’ concerns about familiarity threats. Interestingly, however, some studies observe a cut-off in the increase of audit quality after some time (e.g., Davis et al. 2009; Jenkins and Velury 2008; Raghunathan et al. 1994). Of more relevance to the current paper, some studies have examined financial statement users’ responses to (excessive) auditor tenure. Dao et al. (2008)

find that shareholders believe that longer auditor tenure has a negative effect on audit quality. On the other hand, Ghosh and Moon (2004) find that investors perceive longer auditor tenure improves audit quality.

Even though empirical findings on the potentially adverse effects of tenure are mixed, mandatory rotation of the audit firm has been suggested as a means to alleviate potential threats as it limits tenure to a predefined number of years, thereby offering the auditor a ‘fresh look’ at the client’s financial reporting and hence improving independence and audit quality (Lu and Sivaramakrishnan 2009). Mandatory tendering has also, albeit less frequently, been discussed as a means to enhance auditor independence and, as noted, will become law in the UK (UK Competition Commission 2013). The main difference between rotation and tendering is the ability for the incumbent auditor to be reappointed. By default, mandatory rotation rules out this possibility, while mandatory tendering provides the possibility for reappointment of the incumbent auditor. Of note, opponents to both mandatory firm rotation and tendering raise concerns about the potential barrier in building company-specific knowledge and an effective working relationship with client management, which may ultimately have adverse effects on audit quality (e.g., Solomon et al. 1999). In the following we review research results on the effects of audit firm rotation on auditor independence in *fact* and *appearance*.

### ***Mandatory Audit Firm Rotation***

A few studies have examined the impact of firm rotation on auditor independence *in fact*. Dopuch et al. (2001) performed an experimental markets study in which they find that auditors are less willing to issue biased reports when they were subject to mandatory rotation. Imhoff (2003) suggests that with firm rotation the current auditor is more likely to report specific issues given the certainty of another audit firm taking over the assignment who may discover any negligence. The findings of Dopuch et al. (2001) and Imhoff (2003) are

consistent with the findings of Wang and Tuttle (2009) who report that auditors become less cooperative with clients when mandatory rotation is imposed. Kramer et al. (2011) find indications that reporting conservatism decreases as audit firm tenure increases and concluded that mandatory rotation might enhance reporting conservatism.

Archival research in countries that have adopted mandatory rotation policies report mixed findings. Ruiz-Barbadillo et al. (2009) do not find any significant effects in auditors' likelihood to issue a going-concern opinion to financially distressed firms during and after a mandatory rotation period. Cameran et al. (2014) examine the Italian situation and find the highest level of earnings management in the first three years after a mandatory rotation, suggesting adverse effects of mandatory audit firm rotation on audit quality possibly caused by the lack of client-specific knowledge during early tenure. On the other hand, in Korea, Chung (2004) examines a mandatory rotation regime and finds a decrease in the discretionary accruals of clients that complied with the rotation requirement. Meanwhile, according to Korean findings by Kwon et al. (2010), audit hours and fees increase after a rotation, whereas audit quality (measured using abnormal discretionary accruals) remains unchanged or slightly decreased. Jackson et al. (2008) conclude that audit quality does not benefit from audit firm rotation, but they suggest that *perceived* audit quality (although not investigated by them) may benefit.

In contrast to studies on audit independence in fact, there have been a limited number of studies on the impact of audit firm rotation on independence *in appearance*. For instance, the US General Accounting Office study (2003) found that audit firm rotation could strengthen independence in appearance. In an experimental study, Daniels and Booker (2011) report that the presence of an audit firm rotation policy results in bank loan officers viewing auditors as more independent. Some opponents to mandatory audit firm rotation suggest that mandatory partner rotation (which is in place in most jurisdictions) is sufficient to obtain

auditor independence. Indeed, Kaplan and Mauldin (2008) find that partner versus firm rotation do not differentially affect non-professional investors' independence perceptions. However, Moody et al. (2006) and Gates et al. (2007) present evidence from experiments with judges, MBA students and law students, whose auditor independence perceptions are more strongly affected by audit firm rotation than audit partner rotation.

In a recent study, Carcello and Reid (2013) examine the market reaction to six events in the U.S. that suggested either increased or reduced likelihood of the adoption of mandatory audit firm rotation. The results reveal negative investor reaction to the proposed change, especially for companies who currently have a high quality auditor, as reflected by industry specialization or a Big 4 firm, have a longer relationship with their audit firm, or receive high quality audits, as measured by lower abnormal accruals. While this study suggests investors view mandatory audit firm rotation negatively, the results may also mirror the common initial negative reaction to change (Dent and Goldberg 1999), especially when one is relatively happy with the current situation. It is, thus, difficult to extrapolate from these results to how investors would react when such changes are actually in place.

Reasonably informed investors are likely to be aware of the auditor selection regime in place, since it is mandated in law such as the Sarbanes-Oxley Act in the United States, which requires audit partner rotation but not audit firm rotation. Since rotation reduces the auditor's incentives to please management with the upcoming replacement of the firm, we expect that this practice will generally enhance perceived independence when compared to the current selection regime where the company retains the auditing firm for as long as both parties agree to continue. Long-term relationships between an audit firm and a company are expected to lead investors to question whether, in fact, the auditing firm is independent or beholden to the client. However, as will be discussed, the effectiveness of rotation is likely to also be viewed by investors as dependent upon the autonomy of the audit committee.

### ***Mandatory Audit Firm Tendering***

To our knowledge, there is no empirical evidence on the effects of mandatory tendering on auditors' actual and perceived independence. We are, thus, the first study to examine this issue as it affects independence in appearance. We posit that the auditor's incentives are likely to be affected by this regime and, thus, will likely impact investors' perceptions of auditor independence and investment decisions. In the case of tendering the current auditor remains a potential candidate for reappointment (in contrast to rotation) but has to formally compete for the assignment with other audit firms (in contrast to the current regime), the latter of which may create conscious or unconscious incentives to please the party perceived as having the most influence on the appointment decision—depending on who that is, i.e., a potential *self-interest threat*. However, we suggest that the effect of tendering vis-à-vis the current regime is dependent on the audit committee's autonomy from high-level management. Given this expected interaction, we do not predict a main order effect for auditor selection regime.

### **Audit Committee Autonomy**

In most jurisdictions, legislative guidance (e.g., European Commission 2006) stipulates the audit committee has the responsibility for selecting the audit firm.<sup>8</sup> However, there is widespread recognition and concern in the investment community about potential management influence over corporate governance parties that may inhibit these parties from properly exercising their responsibilities to protect shareholders' interests (e.g., Westphal 1999). For instance, social ties (e.g., friendships) between the top management and members of the board and committees such as the audit committee can lead to undue management

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<sup>8</sup> In many countries the audit committee nominates the audit firm, and this nomination is then formally approved by shareholders at the annual meeting of shareholders. However, it is rare for shareholders not to approve the nomination, so the audit committee has de facto control over auditor selection.

influence over corporate governance bodies (Westphal and Stern 2006; Lerner and Tetlock 1999). Hence, despite the audit committee's formal responsibility for selecting the audit firm, there is evidence that frequently audit committees are heavily influenced by the CFO rather than making the auditor selection decision independently (Cohen et al. 2002, 2010; Dhaliwal et al. 2014). In a field study on the process of engaging a new auditor, Fiolleau et al. (2013) confirm that the audit committee "abdicates its information-gathering and decision-making responsibilities to management, serves as a witness to management's procedures, and approves management's selection decision" (p. 866-867). In an experimental study, Cohen et al. (2014) demonstrate that investors' investment decisions are influenced by the presence of social and professional ties between the audit committee and the CEO.

Similarly, in an archival study on the post-SOX period, Dhaliwal et al. (2014) find that the prior employment relationship of a manager with a Big 4 audit firm is positively associated with companies' choices to hire that audit firm, suggesting substantial management influence on auditor selection. In the current paper, we examine the influence of the auditor selection decision on investment decisions and distinguish between a setting where the audit committee is truly autonomous in the auditor selection decision (i.e., management has no or little say in this regard; high audit committee autonomy) and a setting where the audit committee is *de facto* not autonomous (i.e., management has an overriding say in the auditor selection decision; low audit committee autonomy).

We are only aware of a few studies examining the effect of the auditor selection decision on auditor independence, and they all focus on auditor judgment and outcomes (i.e., independence in fact) rather than financial statement user responses (i.e., independence in appearance). For instance, in an experimental setting Moore et al. (2010) measure auditors' willingness to accept a client's aggressive accounting and find that auditors who are hired by the client firm directly are more willing to accept aggressive accounting than auditors that are

hired by a potential outside investor. Koch et al. (2012) manipulate the selection decision between an aggressive client management and the client firm's conservative and independent oversight board, but find only weak effects on the auditor's audit opinion choice. Dhaliwal et al. (2014) observe numerous instances of management influence on auditor selection during the post-SOX period, but they find no consistent evidence that proxies of auditor independence (e.g., propensity of issuing going concern opinions, abnormal accruals) are affected.

To our knowledge, there is only one prior study that considers the auditor selection regime and the strength of corporate governance (in terms of the auditor selection decision) together. Specifically, Arel et al. (2006) investigate the impact of audit firm rotation in both a weak and a strong corporate governance environment. They find that auditors seem to be less willing to accommodate the client (i.e., act more independently) when faced with a mandatory rotation, but the results with respect to the corporate governance environment are insignificant. However, Arel et al. (2006) examine auditor independence in fact, while the current study focuses on independence in appearance.

## **Hypotheses**

We predict that the effect of auditor selection regime is contingent on the autonomy of the audit committee (see Figure 1). First, we consider a situation where the autonomy of the audit committee is low (i.e., management has a significant say in the auditor selection decision). When a *mandatory tendering procedure* is upcoming, we expect the likelihood of investing to be the lowest. In this scenario, management has influence over the auditor selection decision; therefore, the current auditor is likely perceived by investors as strongly motivated to please management in order to be retained given the upcoming tender opportunity, a self-interest threat. Following Source Credibility Theory, this motivation may lead to lack of perceived independence in the auditor's efforts and, consequently, a less

credible audit report, a higher risk of unreliable financial statements, and hence a lower likelihood of investing.

Still considering a low autonomy audit committee, the *current regime* is expected to lead to higher likelihood of investing than tendering. In this scenario, the issue of auditor reappointment is probably not under active consideration. Also, the likelihood of a new auditor being appointed in the absence of a legal requirement is arguably perceived to be relatively unlikely by the investor given the high costs of auditor turnover for the company (e.g., potential questions about financial reporting reputation and startup costs of working with a new auditor), unless there are concrete indications of auditor-client disagreements. Therefore, the information about the lack of autonomy of the audit committee is likely of little concern for the investor's decision and will impact his/her investment decision to a lesser extent than in the case of tendering. Next, *mandatory rotation* is expected to lead to the highest investment likelihood among the selection regimes in the setting of a low autonomy audit committee, because the upcoming rotation entirely removes the perceived auditor self-interest threat (i.e., the current auditor's incentive to please management in order to be reselected), which in turn safeguards financial reporting integrity in the investor's mind.

At the other extreme, consider a scenario where the audit committee is highly autonomous in the sense that management has little influence over future auditor selection and appointment. We expect the likelihood of investing in this scenario to be the highest when the auditor selection regime is one of either *tendering or rotation*. First, in the case of tendering, the high autonomy audit committee diminishes the direct incentive for the auditor to please management in order to be reappointed during the tendering process, leading to perceptions of high financial reporting quality, low information risk, and hence, a relatively high likelihood of investing. Second, mandatory rotation in combination with a highly autonomous audit committee eliminates auditor incentives to please management, because reappointment of the



incumbent auditor is legally impossible.<sup>9</sup> Our expectations are illustrated in Figure 1 and are reflected in the following hypothesis.

**H1a: The highest level of investment will be when there is tendering or rotation and an audit committee with high autonomy (Cell A = Cell B > all remaining cells).**

**H1b: The lowest level of investment will be when there is tendering and an audit committee with low autonomy (Cell E < all remaining cells).**

<Insert Figure 1 about here>

Aside from the predicted interaction effect, there is also the possibility of a positive “halo” effect (see e.g., O’Donnell and Schultz 2005) of audit committee autonomy, such that the presence of an audit committee with high (low) autonomy may signal to investors a high (low) level of independence of the committee in confronting management on other financial reporting and internal control matters. So, even in the case of selection regimes where audit committee autonomy may not be an equally relevant information cue (i.e., rotation and to some extent current regime), we expect a residual effect of audit committee autonomy due to its halo effect on other perceptions of the audit committee strength, for instance to ensure financial reporting will be of high quality. This expectation leads to our second hypothesis:

**H2: Investors are more likely to invest when the audit committee has high autonomy than when it has low autonomy.**

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<sup>9</sup> With an audit committee having high autonomy there is the possibility that investors may perceive the current auditor must be of high quality and mandatory firm rotation can lead to a lower quality successor auditor, especially given the oligopolistic audit market where there are few audit firm choices. However, this possibility is viewed as unlikely, since investors focus on both independence and competence. As discussed, the threat of familiarity can lead to conscious or unconscious bias, which rotation is designed to mitigate. Further, there is more than one audit firm in all industries with the competence to perform a high quality audit. However, the results will enable us to test the validity of this alternative expectation that rotation will negatively affect investment decisions when the audit committee has high autonomy.

### 3. RESEARCH METHOD

#### Design, Task and Procedure

We designed and administered the experiment by using a between-subjects, 3 x 2, full-factorial design, in which we manipulated auditor selection regime (mandatory rotation, mandatory tendering, current regime) and audit committee autonomy (high, low).<sup>11</sup> We randomly assigned each participant to one of the six treatment conditions.<sup>12</sup> The experiment was administered in 2013 in The Netherlands. We utilized two participant pools of sophisticated investors to obtain the desired number of individuals: investment professionals; and executives enrolled in certification courses. We solicited participation of investment professionals by posting invitations in newsletters, which we circulated to members of the Dutch Association of Investment Professionals (Vereniging van Beleggingsanalisten (VBA) and the Dutch Securities Institute (DSI). By following a URL in the newsletter, participants were directed to a web-based version of the experiment. Executives enrolled in CFA and VBA programs at a large university in The Netherlands<sup>13</sup> participated in the experiment by completing a paper-based version of the instrument. All individuals voluntarily participated in the study in exchange for the possibility of winning a dinner voucher of €100 and a donation of €2.00 to a cancer charity.

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<sup>11</sup> To ensure proper understanding of the case and the manipulations, the experimental materials were thoroughly pilot-tested with five investment professionals with an average professional investment experience of four years and regular to extensive experience with analyzing annual reports.

<sup>12</sup> Distribution of participants to treatments was not entirely random due to an adjustment of the rotation manipulation at a relatively late stage of data selection. As a result, the two rotation treatment cells contain participants from one of the two participant pools (see below) only. However, both participant types possess the requisite task knowledge and participant type is not significantly correlated with the dependent variable; hence the validity of the study is not affected.

<sup>13</sup> The CFA (Chartered Financial Analyst) program prepares executives for the international CFA I, II, and III exams. The VBA (Vereniging van Beleggingsanalisten; Dutch Association of Investment Professionals) program is an investment management program. Both groups of executives hold a significant level of work experience relevant for this study, as will be discussed in more detail later.

Participants read the experimental case materials and then responded to the dependent measure (likelihood of recommending that a client invest) and a secondary measure (recommended investment amount). Participants in the paper-based setting placed the first part of the materials in an envelope, sealed the envelope and opened a second envelope, which contained a post-experimental questionnaire, manipulation checks, covariate measures, and demographic questions. At the end of the session, the experimenter collected both envelopes. In the web-based version of the experiment, participants read the case materials and responded to measures on eight consecutive computer screens. Participants were able to browse back and forth to review case facts before responding to the dependent variable, investment likelihood. However, before proceeding to the post-experimental questionnaire, they were explicitly asked not to go back to the previous screen while answering consecutive questions.

### **Experimental Case**

Participants assumed the role of an investment specialist who had been asked to give his/her advice about an opportunity to invest in the shares of a listed company, XYZ Industries, which delivers innovative and promising products in the recycling and renewable energy market. The investment would be a part of a European equity portfolio held by an institutional investor where the amount currently available for new opportunities is € 10 million. The total size of the investment portfolio is about € 200 million, and the investment opportunity of XYZ Industries was described as being consistent with the portfolio's investment policy. Next we provided background information on the investment opportunity, including a description of the organization's background, strategy, commercial outlook, and some key audited figures. On the fourth screen/page, immediately preceding measurement of the dependent variable, we described some key facts related to the corporate governance of XYZ and its financial statement auditor. We held audit committee expertise constant across

all conditions indicating the committee is compliant with regulatory and stock exchange requirements with respect to financial expertise. The audit committee members were also described as having “no financial or business ties with the company;” hence economic independence was held constant. However, we manipulated audit committee autonomy in the auditor selection decision (see below). The audit firm is a Big 4 auditor that has been engaged for the past eight years and has issued unqualified opinions in all preceding years. Thus, audit firm tenure is held constant at eight years. Our second manipulation varies the auditor selection regime (see below).

### **Audit Committee Autonomy**

We manipulated audit committee autonomy by varying the extent to which the CFO of the company has influence over the selection and appointment of the auditor. We focus on the auditor selection role of the audit committee, since the nexus of the proposed independence measures such as rotation and tendering is on the selection of the audit firm. In the high autonomy audit committee condition, the CFO was described as having “very limited say in the selection and appointment of the auditor” and that “the audit committee makes its own decision on which auditor to select.” In contrast, participants in the low autonomy audit committee condition read about a CFO with “very important say in the selection and appointment of the auditor” and learned that “the audit committee selects an auditor that is satisfactory to the CFO’s preferences.”

### **Audit Firm Selection Regime**

First, participants in the mandatory rotation condition were informed “after an audit firm serves for eight years, regulations require a change (rotation) to another audit firm, such that a tender process be instituted where various firms, excluding the current auditor, compete for the appointment as financial auditor. We selected an eight year horizons given that the study was conducted in the Netherlands and participants might anticipate the upcoming

mandatory audit requirement. Consequently, 2012 was the current audit firm's last audit of XYZ and another audit firm will perform the forthcoming 2013 audit." We deliberately referred to the notion of a tender process as we intended to hold that part of the auditor change constant across rotation and tendering conditions.

Second, in the mandatory tendering condition, we informed participants "after an audit firm serves for eight years, regulations require a tender process be instituted where various audit firms, including the current auditor, compete for the appointment as financial auditor. Consequently, the current audit firm may or may not be the audit firm that will perform the forthcoming 2013 audit."

Finally, participants in the current regime treatment learned that "there are no legal limitations as to how long the audit firm can serve. Consequently, the auditor may continue for as long as the company and audit firm decide to work together."

### **Dependent Variable**

Our dependent variable to measure the participant's investment decision was the likelihood that they would recommend an investment in XYZ Industries on a scale from 0% ("Would definitely not recommend an investment") to 100% ("Would definitely recommend an investment"). We deliberately did not elicit participants' personal investment likelihood, since we wanted him or her to perform a task that is consistent with his or her professional responsibilities as an advisor. Professional advisors and analysts serve a very important role in driving the market.

## **4. RESULTS**

### **Sample Demographics**

A total of 136 investment professionals participated in the experiment. Eighteen participants were eliminated because they did not respond to all the essential items in the questionnaire. Hence, we omit these observations and are left with a sample of 118

participants.<sup>14</sup> Table 1 summarizes the demographics of our sample. The majority of participants are currently employed as investment professionals (68.9%) and participants have an average of 10.7 years of experience in this field, confirming that they have the requisite task experience for this study.<sup>15</sup>

<Insert Table 1 about here>

The investment opportunity described in the case was intended to raise some level of willingness to recommend investment by the participant. At the same time, we did not intend to cause a ceiling effect where all participants would select 100% investment willingness. Participants considered the market (recycling and renewable energy) reasonably attractive ( $\mu=4.71$  on a scale from 1=Not at all attractive to 7=Highly attractive) and the risk return profile of a potential equity investment in XYZ Industries was rated as moderate ( $\mu=3.95$  on a scale from 1=Very negative to 7=Very positive), which is in line with our intentions. In addition to asking for perceived auditor independence, we included two additional perception questions about the auditor. First, the auditor of XYZ was considered reasonably competent ( $\mu=4.87$  on a scale from 1=Not at all competent to 7=Highly competent), and participants rated the auditor's report as reasonably important in their assessment of the investment opportunity ( $\mu=4.52$  on a scale from 1=Not at all important to 7=Very important).<sup>16</sup>

As described previously, we solicited responses via two distinct channels: 58 (49.2%) professionals via a web-based instrument: and 60 (50.8%) executives via a paper-based instrument. To assess the two groups' homogeneity we compare them on a number of

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<sup>14</sup> More specifically, nine participants did not complete the manipulation checks, the demographic questions, and the perception questions; and another nine did not answer the demographic questions and the perception questions.

<sup>15</sup> Of note, 14 participants in our sample have no experience with financial statement analysis. Excluding these participants does not qualitatively alter the results.

<sup>16</sup> Neither the assessment of auditor competence nor the perception of audit report importance vary across experimental conditions. Hence, we accomplished our intention to hold these aspects constant.

dimensions.<sup>17</sup> As expected, professionals hold more working experience as investment professionals ( $\mu=17.41$  years) than the executives ( $\mu=4.19$  years;  $p<0.01$ ). They also have analyzed financial statements more frequently ( $\mu=2.36$ , equaling between 10 and 25 times) than the executives ( $\mu=1.80$ , equaling about 10 times;  $p<0.05$ ). Not surprisingly, a greater proportion of the professionals were currently employed as investment professionals (81%) than the executives (58.3%;  $\chi^2=7.17$ ,  $p<0.01$ ). However, the two groups do not differ significantly with respect to risk appetite ( $p=0.21$ ). We also compared the two groups across a number of case-related measures. Their responses do not differ significantly with respect to investment amount ( $p=0.26$ ), perceived auditor competence ( $p=0.40$ ), perceived importance of the auditor's report ( $p=0.71$ ), perceived attractiveness of the described market ( $p=0.38$ ), or the assessed risk-return profile of the investment target ( $p=0.18$ ).

Finally, we examine whether the two types of participants responded differently to our dependent measure, to assess whether we should control for participant type in the upcoming hypothesis test. However, the groups are not significantly different with respect to likelihood of investing ( $p=0.14$ ); hence, we do not control for participant type in the upcoming analyses.<sup>18</sup>

We next consider additional variables to be controlled for during hypothesis testing. First, we control for the recommended investment amount and the assessed risk-return profile of the investment target, because both assessments are expected to affect the likelihood of investing and are strongly correlated with the dependent variable ( $p<0.01$ ). The risk-return profile reflects the perceived attractiveness of the investment, while the investment amount is an indication of the strength or intensity of the participant's recommendation to invest, i.e., larger amounts reflect a stronger recommendation. Second, we include our measure of risk

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<sup>17</sup> All tests are two-tailed.

<sup>18</sup> Including type of participant as a covariate does not qualitatively affect the results.

appetite as a covariate, because it is conceptually expected to affect the likelihood of investment and also because it is correlated with investment likelihood ( $p < 0.10$ ). Since none of the remaining demographic variables (gender, working experience, financial statement analysis experience, and current employment as investment professional) are significantly associated with recommendation likelihood, we do not include them in the analysis.<sup>19</sup>

Finally, the likelihood of investing correlates significantly (and positively) with perceived independence of the auditor ( $p < 0.01$ , two-tailed), which is in line with our earlier reasoning that investors' perception of auditor independence should influence their willingness to invest. However, rather than include perceived auditor independence as a covariate, we run additional analyses to test whether the effect of auditor selection regime and audit committee strength on the likelihood of investing is mediated by perceived independence (see Table 3, Panel A).

### **Manipulation Checks**

To assess whether our manipulation of audit committee autonomy was successful we asked participants to indicate the primary party that determines the selection and appointment of the auditor. Participants responded on a seven-point scale with 1=The CFO; 4=CFO/audit committee equally; 7=The audit committee. The mean in the high autonomy audit committee strength condition (5.96) is significantly higher (and in the expected direction) than in the low autonomy audit committee strength condition (3.18;  $p < 0.01$ , one-tailed). To test whether audit committee autonomy has spillover effects on overall audit committee independence, we also asked participants to indicate the extent to which the members of XYZ's audit committee are independent vis-à-vis the company's management, where independence was described as the

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<sup>19</sup> Including demographic variables as covariates does not qualitatively alter the results. In addition, some case-based variables are associated with investment likelihood: perceived competence ( $p < 0.01$ ), perceived market attractiveness ( $p < 0.01$ ), and perceived audit report importance ( $p < 0.05$ ). Including these case-based measures as covariates does not qualitatively alter the results.



extent to which the committee makes its own decisions, whether or not their choices conflict with management's preferences (1=Not at all independent; 7=Highly independent). Again, the difference between the two treatment means is significant and in the expected direction ( $p < 0.01$ , one-tailed), such that participants in the high autonomy audit committee condition rated independence significantly higher (4.74) than participants in the low autonomy audit committee condition (3.67). Overall, we conclude that our manipulation of audit committee autonomy was successful.

We assessed the effectiveness of the auditor selection regime manipulation in two ways. First, participants responded to a categorical measure where they were asked to choose among three alternatives to identify the legal requirements as to the appointment of the audit firm. The majority of participants (86 out of 118 participants) provided the correct answer. However, 12 participants in the current regime condition, 8 participants in the rotation condition, and 12 participants in the tendering condition selected an appointment regime not in line with the manipulation. Second, participants responded to a continuous measure from 0% (Will definitely not be the auditor next year) to 100% (Will definitely be the auditor next year). Bonferroni post-hoc tests show that the rotation mean (25.38) is significantly lower than the tendering mean (58.97) and the current regime mean (68.0) (both  $p$ 's  $< 0.01$ ; one-tailed), but the latter two means are not significantly different from each other ( $p = 0.59$ ). Hence, on average, participants in the rotation condition correctly perceived reappointment likelihood to be very low, while participants in the tendering and current regime conditions perceived a greater probability of reappointment. It is potentially worrisome that some participants did not properly understand the rotation manipulation. Therefore, in upcoming robustness checks, we omit participants in the rotation condition that indicate reappointment likelihood is greater than zero. Also, we conduct a robustness check in which we include

perceived reappointment likelihood as a covariate. As more fully described in footnote 20, all robustness checks result in qualitatively similar results.

## **Hypothesis Testing**

The dependent variable in this study is how likely the participants would recommend an investment in XYZ Industries. Table 2 Panel A's ANCOVA shows the overall model for recommendation likelihood ( $F(1,109)=16.37$ ,  $p<0.001$ ) is highly significant at the conventional level. We observe a significant main effect of audit committee autonomy ( $p<0.01$ ), such that the likelihood of investing is significantly higher in the high autonomy audit committee condition (56.48) compared to the low autonomy audit committee condition (45.35), supporting H2. As expected due to the predicted interaction, the main effect of auditor selection regime is not significant ( $p=0.42$ ). The interaction effect of audit committee strength and auditor selection regime is significant ( $p<0.05$ ), ultimately qualifying the interpretation of the significant main effect (H2).<sup>20</sup>

<Insert Table 2 and Figure 2 about here>

### ***Hypothesis 1a***

Hypothesis 1a predicts that the highest level of investment obtains when there is an audit committee with high autonomy and either tendering or rotation is mandatory. The ANCOVA in Table 2, Panel A reveals a significant interaction term ( $p<0.05$ ). Inspection of the adjusted means (Table 2, Panel B) and the observed interaction plot (Figure 2) preliminarily suggest that rotation (60.07) and tendering (60.21) indeed lead to the highest

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<sup>20</sup> To test for the influence of failed manipulation checks, we excluded participants that failed the categorical manipulation check of auditor selection regime, resulting in a sample of  $n=86$ . The same ANCOVA as shown in Table 2, Panel A is again significant and reveals qualitatively equivalent results. Second, we excluded participants in the rotation condition that during manipulation checking indicated a reappointment likelihood greater than zero, resulting in a sample of  $n=106$ . The results are qualitatively similar to the primary results. Finally, we included the assessed reappointment likelihood as a covariate ( $p=0.99$ ). Again, results are qualitatively similar to the primary findings.

level of investment likelihood, given that all other means are lower. We examine simple effects (adjusted for covariates) in Table 2, Panel C, which confirm that cell A (i.e., rotation and high autonomy audit committee) is significantly greater than all other cell means (highest  $p=0.041$ ), except cell B (i.e., tendering and high autonomy audit committee;  $p=0.980$ ). Similarly, cell B is greater than all other cell means (highest  $p=0.037$ ), except cell A. Hence, the findings support H1a, such that tendering and rotation with a high autonomy audit committee lead to the highest investment likelihood.

### ***Hypothesis 1b***

Hypothesis 1b predicts that the lowest likelihood of investment will occur when the auditor selection regime is one of mandatory tendering and the audit committee autonomy is low. Inspection of the adjusted means (Table 2, Panel B) and the observed interaction plot (Figure 2) preliminarily suggest that tendering in the low autonomy audit committee condition (40.64) indeed seems to lead to the lowest investment likelihood, given all other means range from 47.07 and upward. We examine simple effects (adjusted for covariates) in Table 2, Panel C, which only partially supports H1b: Cell E is significantly different from cells A, B and C (i.e., all auditor selection regimes given a high autonomy audit committee), but not significantly different from any of the other means in the low autonomy audit committee condition. Hence, in contrast to our expectations, given a low autonomy audit committee, the three auditor selection regimes lead to an equally low likelihood of investing. Potential reasons for this unexpected finding are explored in additional analyses and the final section.

### ***Hypothesis 2***

Hypothesis 2 predicts an overall positive effect of audit committee autonomy on the likelihood of investing. Even though the main effect is statistically significant (see Table 2, Panel A), the significant interaction with auditor selection regime and simple effects reported in Table 2, Panel C reveal that the main effect holds for rotation (cell A versus cell D;  $p<0.05$ )

and tendering (cell B versus cell E;  $p < 0.01$ ) but not for the current regime (cell C versus cell F;  $p = 0.87$ ). We will discuss possible reasons for the lack of a significant audit committee autonomy main effect for the current regime in the discussion section.

## **Additional Analyses**

### ***Mediation analysis***

The underlying conceptual reason for H1 is that investors' perceptions of auditor independence explain why auditor selection regime in interaction with audit committee autonomy affects investment decisions.<sup>21</sup> We employ the Baron and Kenny (1986) and Sobel (1982) methods to test whether perceived auditor independence mediates the interaction effect of auditor selection regime and audit committee autonomy on the likelihood of investing (not tabulated). We find that the tendering X ACA interaction effect on likelihood of investing is partially mediated by perceived auditor independence.

### ***Further exploring the interaction finding***

We conducted an additional ANOVA (not tabulated) to examine the effect of our two independent variables on participants' perceptions of an ancillary, broader measure of audit committee independence, as briefly described previously as one of the manipulation check questions: How independent are the members of XYZ's Audit Committee vis-à-vis the company's management, where independence is the extent to which the committee makes its own decisions whether or not their choices conflict with management's preferences?" (1=Not at all independent; 7=Highly independent). The audit committee autonomy effect is highly significant; however, this effect is significantly stronger for tendering than for the other two

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<sup>21</sup> As part of our post-experimental questionnaire, we measured perceived auditor independence by asking participants to respond to the following question on a scale ranging from 1 (not at all independent) to 7 (highly independent): "In your opinion, how independent is the auditor in determining whether the 2012 financial statements give a true and fair view of the financial status and performance of XYZ Industries?"

selection regimes, which is caused by a notably low rating of audit committee monitoring strength in the tendering/weak audit committee condition.<sup>24</sup> Hence, we observe some support for our H1b, such that a low autonomy audit committee is perceived as particularly worrisome when a tender process is anticipated. As reported, these perceptions did not directly translate into participants' investment decisions, but suggest that tendering in combination with an audit committee with low autonomy seems to trigger particular concern among financial statement users.

## 5. CONCLUSION AND DISCUSSION

Mandatory audit firm rotation and tendering have been currently considered or enacted both by the EU and the PCAOB as a means to strengthen auditor independence. However, there is little empirical research to examine whether these proposed auditor selection regimes enhance independence over the current regime where the client and the audit firm continue their association as long as they mutually agree to do so. As required by auditing standards, auditors must be both independent in fact and in appearance. The primary objective of the current study is to examine independence in appearance by empirically testing whether the three different auditor selection regimes ultimately impact investment decisions. Investment decisions are at least partly based on financial performance, as reflected in the financial statements, and auditors serve to reduce the information risk surrounding this information and, thus, bolster the efficiency of the capital markets. Relying on Source Credibility Theory (Birnbaum and Stegner 1979), we posit that the credibility of the auditor to investors is dependent upon perceived source bias (or source objectivity), and the different auditor selection regimes are likely to impact the perceived economic dependence of the auditor on pleasing management in financial reporting.

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<sup>24</sup> More specifically, the mean difference in the tendering weak versus strong audit committee cell is 1.7, while the difference in means for rotation (current regime) is only 0.9 (0.7).

Another important mechanism to enforce auditor independence that has been implemented in many countries and emphasized in the current discussions is the role of the audit committee, since one of the main responsibilities of the committee is to select the auditor. In this paper, we predict an interaction between the autonomy of the audit committee to select the auditor and the selection regime on investment decisions. That is, investors are expected to consider the impact on auditor independence of how a particular selection regime will actually be implemented by the company.

Our findings indicate that the likelihood of investing is positively affected by a mandatory rotation or tendering regime vis-à-vis the current regime, but only when the audit committee has high autonomy, such that decisions related to auditor selection are made without interference by the CFO. On the other hand, when the audit committee has low autonomy, we do not find support for our prediction that tendering would lead to the lowest likelihood of investing. Rather, an audit committee with low autonomy results in an equally low investment likelihood, regardless of the auditor selection regime in place. This result suggests that neither tendering nor rotation will be viewed by investors as effective in a weak corporate governance scenario. That is, the auditor selection regime and audit committee autonomy are considered complements, not substitutes, in achieving auditor independence. Interestingly however, tendering triggers particularly low audit committee independence ratings given an audit committee with low autonomy. Albeit with respect to independence in appearance, our results confirm the recent claim by Fiolleau et al. (2013): “If management, with private information and interests, continues to have substantial influence over hiring the auditor, the regulatory reforms for audit firm rotation and/or audit committee empowerment are likely to be ineffective” (p. 865).

In addition, the results suggest that the effect of audit committee autonomy was particularly strong in the rotation condition, suggesting a halo effect of autonomy on other

dimensions of audit committee quality. It is also possible that the autonomy of the audit committee plays such an important role in the rotation condition, because investors incorporate future-oriented considerations in their decision; that is, an autonomous audit committee is needed to select a high quality auditor in the upcoming year. Interestingly, under the current regime, participants' willingness to invest was not at all affected by audit committee autonomy; i.e., we find no evidence of a halo effect in the current regime condition. This finding may be because participants perceive familiarity threats under the current regime are present whether the audit committee is autonomous or not. Alternatively, investors' focus on the auditor selection procedure may not even be triggered in this scenario since an auditor change is considered relatively unlikely. Nonetheless, of note, the level of investment under the current regime was relatively low, suggesting this institutional arrangement may impair investors' willingness to invest, a concern that warrants further research and consideration. Future research is needed to examine these or other explanations for the lack of an effect for audit committee autonomy in the current regime setting.

As for any study, there are limitations in the scope and method that should be considered in interpreting the findings. The experiment entails a single period setting, while in practice investors make investment decisions over multiple periods. Thus, an important issue is how the auditor selection regime and corporate governance mechanisms are interpreted over time. For instance, how do these factors affect investors' investment judgments for rotation or tendering in subsequent years (1, 2, 3...) after an auditor selection decision is made? Additionally, the potential costs of a change in auditor were not made explicit to participants in the experiment such as potentially lower auditor effectiveness with a new auditor who does not know the client well or the additional transition costs by the client and the auditor (e.g., learning). While experienced, sophisticated investors such as those involved in this study are likely aware of these costs, future research is needed to determine how this

may impact investment decisions. We also did not we make the expertise of the current or future auditor explicit. It is possible that for example that industry expertise would change the results we obtained. Finally, audit committee autonomy is not currently publicly disclosed information, so the external validity of our study may be called into question. However, our findings highlight that this factor has a significant effect on the impact of alternative auditor selection regimes on investment decisions. Thus, it is important for regulators to establish policies to ensure investors have confidence that sound corporate governance mechanisms are in place to optimize the effects of auditor selection regimes. Our study also suggests that disclosure of such policies may provide relevant information in the investment decision process.

The primary finding in this study is that investors do not view auditor selection regimes in isolation of a company's internal corporate governance mechanisms. Investors appear to consider both auditors and the audit committee as complementary monitors over financial reporting. Most importantly, we find that tendering or rotation do not enhance investment decisions if the auditor committee is not autonomous in selecting the auditor. This finding has important practice and policy-making implications suggesting that to enhance audit quality both selection regime and corporate governance must be jointly considered. Since the focus of the current study is on auditor independence in appearance, future research is also needed to examine how auditor selection regime and corporate governance together impact preparer reporting behavior as well as auditor independence in fact.



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**Table 1: Sample Demographics (n=118)**

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Min.</b>	<b>Max.</b>
<b>Working experience (years) as investment professional</b>	10.7	11.0	0	43
<b>Risk appetite<sup>a</sup></b>	73.3	80.0	1	90
<b>Gender</b>	99 males (83.2%) 19 females (16.0%)			
<b>Currently employed as investment professional</b>	82 yes (68.9%) 36 no (30.3%)			
<b>F/S analysis experience</b>	Never: 14 (11.9%) <10 times: 39 (33.1%) >10 times: 17 (14.4%) >25 times: 20 (16.9%) >100 times: 28 (23.7%)			
<b>Investment professionals vs. executives</b>	Professionals: 58 (49.2%) Executives: 60 (50.8%)			

**Notes:**

<sup>a</sup> Risk appetite: When do you prefer a lottery over a sure thing? The following 10 items represent a series of choices between two alternatives: a sure thing versus a lottery. You can either receive €500 for sure or you can decide to take part in a lottery. Please indicate at which point you **FIRST PREFER THE LOTTERY OPTION** over a sure thing.

1=€500 for sure vs. lottery: 10% chance for €1000; 90% chance for €0.00

2=€500 for sure vs. lottery: 20% chance for €1000; 80% chance for €0.00

3=€500 for sure vs. lottery: 30% chance for €1000; 70% chance for €0.00

4=€500 for sure vs. lottery: 40% chance for €1000; 60% chance for €0.00

5=€500 for sure vs. lottery: 50% chance for €1000; 50% chance for €0.00

6=€500 for sure vs. lottery: 60% chance for €1000; 40% chance for €0.00

7=€500 for sure vs. lottery: 70% chance for €1000; 30% chance for €0.00

8=€500 for sure vs. lottery: 80% chance for €1000; 20% chance for €0.00

9=€500 for sure vs. lottery: 90% chance for €1000; 10% chance for €0.00

10=€500 for sure vs. lottery: 100% chance for €1000; 0% chance for €0.00

**Table 2: Hypothesis Testing**

**Panel A: Results of a 2x3 ANCOVA of Investment Recommendation Likelihood (n=118), Controlling for Investment Amount, Risk-Return Profile, and Risk Appetite**

Source	Type III Sum of Squares	df	Mean Square	F-value	p-value
Model	33868.49	8	4233.56	16.37	0.000***
Audit Committee Autonomy (ACA)	3606.76	1	3606.76	13.95	0.000***
Auditor Selection Regime (ASR)	452.68	2	226.34	0.88	0.420
ACA x ASR	1771.37	2	885.68	3.43	0.036**
Covariates:					
Investment Amount	8158.69	1	8158.69	31.55	0.000***
Risk-Return Profile	7988.67	1	7988.67	30.89	0.000***
Risk Appetite	1256.01	1	1256.01	4.86	0.030**
Error	28189.98	109	258.62		

**Panel B: Adjusted Means (Standard Errors) [n] of Audit Committee Autonomy and Auditor Selection Regime on Recommendation Likelihood**

		Audit Committee Autonomy		
		Non-Autonomous	Autonomous	Total
Auditor Selection Regime	Current Regime	48.34 (3.60) [20]	49.17 (3.61) [20]	48.75 (2.55) [40]
	Rotation	47.07 (3.62) [20]	60.07 (3.78) [19]	53.57 (2.62) [39]
	Tendering	40.64 (3.52) [21]	60.21 (3.80) [18]	50.43 (2.60) [39]
	Total	45.35 (2.14) [61]	56.48 (2.14) [57]	50.92 (1.48) [118]

**Panel C: Follow-up simple effect tests (employing adjusted means)**

<b>Cell Comparison (I versus J)</b>	<b>Mean Difference (I-J)</b>	<b>S.E.</b>	<b>p-value</b>
(1) A versus B	-0.13	5.37	0.980
(2) A versus C	10.90	5.28	0.041**
(3) A versus D	13.01	5.24	0.014**
(4) A versus E	19.43	5.21	0.000***
(5) A versus F	11.73	5.23	0.027**
(6) B versus C	11.04	5.23	0.037**
(7) B versus D	13.14	5.26	0.014**
(8) B versus E	19.56	5.17	0.000***
(9) B versus F	11.87	5.23	0.025**
(10) C versus D	1.10	5.13	0.682
(11) C versus E	8.52	5.03	0.093*
(12) C versus F	0.83	5.09	0.871
(13) D versus E	6.42	5.07	0.208
(14) D versus F	-1.27	5.11	0.804
(15) E versus F	-7.69	5.03	0.129

**Notes:**

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Recommendation Likelihood:** Likelihood you would recommend an investment in XYZ Industries. (0%=Would Definitely Not Recommend An Investment; 100%= Would Definitely Recommend An Investment).

**Audit Committee Autonomy:** CFO is described to have very limited (high autonomy) versus strong (low autonomy) influence on the selection and appointment of the auditor.

**Auditor Selection Regime:** Mandatory upcoming rotation; mandatory upcoming tendering; or current regime.

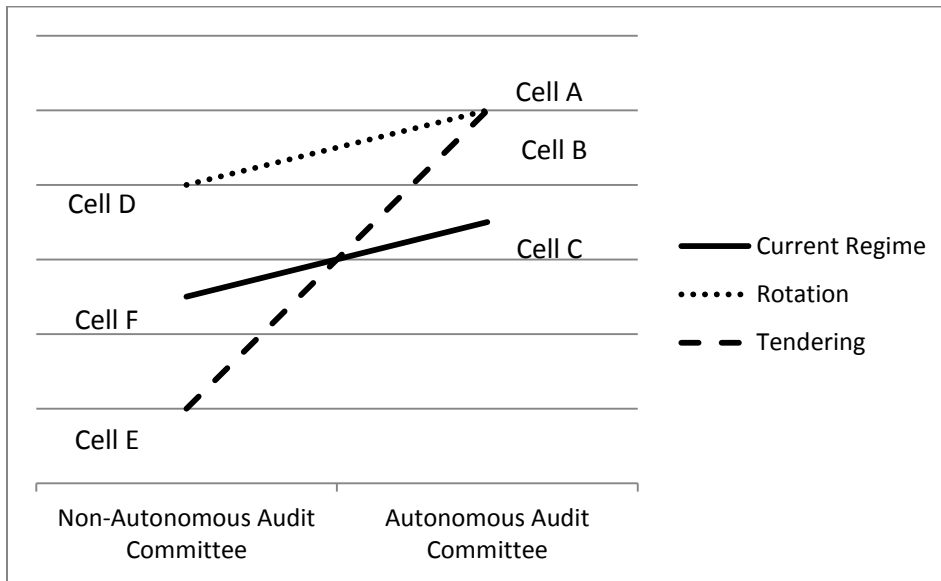
**Investment Amount:** Recommended amount to be invested, between €0 and €200 million.

**Risk-Return Profile:** Assessed risk-return profile of an equity investment in XYZ Industries (1=Very negative; 7=Very positive).

**Risk Appetite:** When do you prefer a lottery over a sure thing? The following 10 items represent a series of choices between two alternatives: a sure thing versus a lottery. You can either receive €500 for sure or you can decide to take part in a lottery. Please indicate at which point you **FIRST PREFER THE LOTTERY OPTION** over a sure thing. (ranging from 1=€500 for sure vs. lottery: 10% chance for €1000; 90% chance for €0.00 to 10=€500 for sure vs. lottery: 100% chance for €1000; 0% chance for €0.00)



**Figure 1: Audit Committee Autonomy and Auditor Selection Regime on Likelihood of Investing: Predicted Interaction Effect**



Cell A: High Autonomy Audit Committee; Rotation  
 Cell B: High Autonomy Audit Committee; Tendering  
 Cell C: High Autonomy Audit Committee; Current Regime  
 Cell D: Low Autonomy Audit Committee; Rotation  
 Cell E: Low Autonomy Audit Committee; Tendering  
 Cell F: Low Autonomy Audit Committee; Current Regime

H1a: Cell A = Cell B < remaining cells  
 H1b: Cell E < remaining cells

**Figure 2: Audit Committee Autonomy and Auditor Selection Regime on Likelihood of Investing: Observed Interaction Plot (Adjusted Means)**

