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MSc Accounting, Auditing and Control

Does Experience Improve Audit Quality and Reputation? An Archival Study

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Abstract

This paper studies the relationship between the number of years of audit experience and the audit quality. Furthermore, it is investigated whether investors perceive quality differently when the audit report is signed by a more experienced partner. The proxies used for quality and perceived audit quality are discretionary accruals and earnings response, respectively. It is hypothesized that experience is negatively related to absolute discretionary accruals, and, positively related to earnings response. Ordinary Least Square regressions are used to analyse the archival firm year data (n = 369). The results of the analyses, however, show no significant evidence of a relationship between experience and audit quality. Though, the results of the additional analyses do show that experience gained in a big four firm does enhance audit quality compared to non-big four firms (i.e. earnings management is reduced). Additionally, no evidence is found for a relationship between auditor experience and investors' perceived audit quality. Likewise, no relationship is found between big four experience and the magnitude of the stock price change.

1. **Introduction**

1.1 Research Question

This research mainly tries to answer whether the experience of an individual auditor (i.e. the audit engagement partner) has an effect on audit quality. Additionally, the current paper investigates the relation of auditor experience with investors' perceived audit quality, thus the earnings response.

In order to enhance partner accountability, leading to better audit quality, and improve transparency on the audit process, the Public Company Accounting Oversight Board (PCAOB) adopted a new set of rules in 2017. PCAOB rule 3211 requires public accounting firms to file a report on Form AP (PCAOB 2016). This form discloses the names of the engagement partners and other accounting firms that have worked on the specific audit. A similar rule has been in place in the Netherlands since 2006. With the accessibility to the name of the engagement partner being a stepping stone to a broad range of information on auditor specific characteristics, this gives opportunities for research on this topic. For example, information on the auditor's experience can be gathered.

Following this possibility, an archival study is performed on the effect of individual auditor experience on the quality of the audit at hand. Furthermore, this study builds on theory that investors' responses to earnings announcements are dependent on auditor credibility (Teoh & Wong, 1993). If an audit partner's experience is positively correlated with its skilfulness and competence, it may be perceived as a proxy for credibility. Following Wang and colleagues (2015) in investigating the relationship of auditor's experience and their perceived credibility, investors' responses to earnings announcements are studied in relation to audit experience.

1.2 Relevance

Much of the existing literature on audit quality is performed at the firm level. For example, Bills and colleagues (2016) provide evidence on the effect of office growth on audit quality. Additionally, it has been found that audit firm size is associated with audit quality (DeAngelo, 1981). It may well be true that audit firm characteristics and firm culture will have an influence on an individuals' way of working and perception of quality. However, besides firm culture, quality is determined by an individuals' competency. To form an audit opinion, a variety of tasks need to be completed, making it likely that personal characteristics of an auditor have an effect on the outcome, thus the quality of the audit (Gul et al., 2013). Furthermore, previous literature has found that disappointing audit quality is contagious at a personal level. This means that when an auditor fails in performing the audit, s/he has a higher chance of failing

next year's audit, also. However, this contagion effect has been found to be smaller for more experienced auditors (Li et al., 2017).

Moreover, policy makers call for more insights in audit quality at the individual level. This is highlighted by the partner name disclosure requirement as per PCAOB rule 3211 (PCAOB, 2016). Additionally, the Financial Reporting Council of the United Kingdom has a framework to identify the key drivers of audit quality, including a section on skills and personal qualities of engagement auditors (FRC, 2006).

This study tries to gain a broader insight of what determines the audit quality. Specifically, the study attempts to answer the question whether experience brings more competence. The current paper adds to the existing literature on firm characteristics in relation to audit quality by looking at a lower level of effect. Furthermore, research performed on audit quality affected by individual characteristics is extended. Little of the existing literature in this field has been able to conduct an archival study since data on an auditor's identity, thus, individual traits was not available. Experimental studies have found contradicting evidence on the influence of auditor experience. Findings show that more experienced auditors have more comprehensive knowledge to explain errors in financial statements (Libby & Frederick, 1990). On the contrary, high experience might come with an unconscious bias and over-reliance (Bazerman et al., 1997), leading to audit predictions in line with previous experience (Frederick & Libby, 1986).

Disclosure of the identity of the signing auditor has started a new stream of research. In China, the identity of the auditor can be linked to a large amount of personal information, such as, demographics and political interests. By studying these individual characteristics Gul and colleagues (2013) find significant differences in audit quality affected by level of education, demographics and Big N firm experience. Similarly, other archival studies on the Chinese audit field find evidence for a negative association between income increasing accruals and years of experience (Cahan & Sun, 2015; Wang et al., 2015). Since the adoption of PCAOB rule 3211 (PCAOB 2016), this stream of research has extended to the United States. The adoption led to an increase in audit quality and a decrease in the delay of the audit. These findings suggest that the intended enhancement of partner accountability has been reached (Burke et al., 2019). Consequently, the study of Burke and colleagues (2019) finds associations between individual auditor characteristics and features of the audit process, such as a delay.

Adding to this stream of research, a similar study is shifted to the Netherlands. Typically, Dutch audit firms follow a standardized hierarchy. Following this structure, an

accountant will be promoted every two to three years, leading to the possibility to make partner after approximately 10 years. The findings of this study may have implications for this structure in two ways. Firstly, when a positive relation between years of experience and audit quality is found, audit firms might seek to extend this hierarchal structure. Contrarily, when no relation is found, audit firms could consider to make the hierarchy less rigid.

Moreover, as follows from the three-party relationship in auditing, the findings of this study have implications for the intended users of the audited financial statements. Particularly, this study has implications for investors as they mostly rely on the individual characteristics of an auditor (Christensen et al., 2016). Consequently, announcements of failed audits lead to a negative market reaction for client firms (Li et al., 2017). Following this line of reasoning, and in relation to Wang and colleagues (2015), the relation between engagement partner experience and investors' perceived audit quality is investigated.

1.3 Methodology

As argued above, it is likely that personal traits of an auditor have an influence on the outcome of the audit, thus the quality (Gul et al., 2013). Additionally, it has been found that contagion of bad performance is less likely to occur for auditors with more experience (Li et al., 2017). As the first hypothesis, a positive association between years of experience in the field of auditing and the quality of the performed audit is predicted. Thus:

Hypothesis 1: engagement partner experience is positively associated with audit quality.

The second hypothesis of this thesis is related to investors' perceived audit quality. Following numerous earlier studies, I will use Earnings Response Coefficients (ERC) as a proxy for perceived audit quality (Wang et al., 2015; Ghosh & Moon, 2005; Teoh & Wong, 1993). As more experience is often seen as a sign of higher competence, it is predicted that the perceived quality of an audit will increase with more experience. This forms the second hypothesis:

Hypothesis 2: engagement partner experience is positively associated with perceived audit quality.

To test these hypotheses an archival study is performed. For the first hypothesis discretionary accruals are used as a proxy for audit quality as dependent variable. This is

calculated using COMPUSTAT firm data. For the analysis of the perceived audit quality by investors, a modified ERC is used as dependent variable. In this case the ERC is calculated as the price change of a firm's share over the three days surrounding the earnings announcement. The study investigates whether the magnitude of the price change differs for more experienced auditors. COMPUSTAT is used to gather firm data, earnings responses are calculated using stock prices and announcement dates gathered from Thomson Reuters Datastream.

The main independent variable is the years of experience the audit partner has. The names of the signing audit partner are collected from the published financial statements. Using the registration date of the partner as chartered accountant at the Nederlandse Beroepsorganisatie van Accountants (NBA), the number of years since registration until the signing date as years of experience is calculated. This is an extension of the measure that Wang and colleagues (2015) use, who calculate the number of years of the first signing until the current signing as years of experience. The current measure comes closer to the actual years a partner has worked as an accountant. Furthermore, experience gathered in a big four firm opposed to a non-big four firm may differ. For this reason an additional analysis with an interaction term of experience and big four is performed.

The sample consists of Dutch listed companies, this enables the subtraction of years of experience of the audit partner from the NBA register, with observations from 2015 until 2020.

Several client firm specific control variables are added to analyses. Such as, the size as measured by total assets, leverage as measured by total liabilities divided by total assets, whether the client firm reported a loss or not in the current period. Moreover, a control is added for the auditor working for one of the big four audit firms.

The results of the regressions do neither support hypothesis 1 nor hypothesis 2. Thus, no evidence is found that experience as an accountant has a significant impact on the audit quality. Similarly, the experience of the engagement partner does not influence the way that investors perceive audit quality.

2. Literature Review and Hypothesis Development

Previous literature has described audit quality as the probability that an auditor will discover errors in the client's accounting system and, consequently, will report these errors (DeAngelo, 1981). In line with this definition, higher quality auditors are more likely to find and report a client's questionable accounting activities. To operationalize audit quality, a measure of earnings management can be used, as a higher audit quality has a negative

relationship with earnings management. More specifically, it has been found that companies that have been audited by lower quality auditors (i.e. non-Big *N*) have larger variability in discretionary accruals (Becker et al., 1998). Building on these findings and using an adjusted version of the Jones model, this study whether years of working as an auditor (i.e. experience) is positively related to the client's discretionary accruals.

When looking at the perceived audit quality, the definition stated above can be redefined as the market-assessed probability that the auditor will discover an error in the financial statements and report this error (DeAngelo, 1981). Adding to this definition of audit quality, it can be explained as the perceived ability to reduce noise and bias in accounting data. Hence, adding credibility to financial data. The distinction between actual audit quality and perceived audit quality can be otherwise described as the difference between 'monitoring strength' (i.e. independence in fact) and 'reputation' (i.e. independence in appearance), respectively (Watkins et al., 2004). As an investors' response to earnings announcements depends on the perceived credibility op financial statements (Teoh & Wong, 1993), the information such an announcement conveys can be investigated. Therefore, to measure the auditor's reputation, this study investigates years of experience and the resulting differences in the ERC.

A common assumption made in research on audit quality is that auditor quality, as a firm-specific attribute, is equal to audit quality, as an audit-specific attribute. For example, audit firms are assumed to provide a single level of audit quality at a given moment. Leading to the synonymous usage of 'audit quality' and 'auditor quality' (Clarkson & Simunic, 1994). However, there is evidence that auditors at the firm level do not provide a consistent degree of quality. For example, audit failures as Enron and WorldCom suggest a differentiation between audit firm quality and audit-specific quality (Watkins et al., 2004). Therefore, this study investigates the relation of personal characteristics on audit-specific quality.

The remainder of this section is organized as follows. First, the hypothesis regarding the effect of experience on actual audit quality will be developed. Thereafter, a literature review concerning perceived audit quality is used to develop the hypothesis on the effect of experience on investor's reactions to the audit.

2.1 Audit Quality

To bring clarity to the role of knowledge in audit judgement, and, to add to the understanding of audit judgement, Libby (1995) lays out a model of the impact of knowledge acquisition on judgement performance. This "antecedents and consequences of knowledge" model attempts to provide insights to several questions. Specifically, what the role of

experience in knowledge is. It recognizes that there are two inputs, being abilities and experience, which can be defined as opportunities to acquire specific knowledge that is more or less relevant in future tasks. These inputs lead to a state of knowledge, described as information stored in memory. In short, among others, task-related experience is a determinant of knowledge. Subsequently, knowledge affects the output variable of the model; performance. The possibility exists that more experienced partners are outperformed by less-experienced auditors with more relevant special knowledge of the task at hand (Johnson & Jamal, 1987). However, the assumption is made that more experienced auditors have had more learning opportunities, thus have a larger knowledge base. Hence, following Libby's (1995) model, auditors with more years of experience perform tasks better through a larger knowledge base.

Libby and Frederick (1990) perform an experimental study that tests similar links as described in the "antecedents and consequences of knowledge" model (Libby, 1995). While many of the operational procedures in an audit are left to less experienced auditors, it is left to the more experienced auditors to explain and interpret the results of these procedures. In other words, the outcome and quality of the audit is dependent on the probability of the more seasoned auditors to discover breaches in the accounting system and report these. This probability is affected by experience-related knowledge changes, leading to a broader understanding of the array of plausible errors and a more complete consideration of likely explanations. Moreover, due to the knowledge of more likely breaches and explanations, more experienced auditors have the ability to reach conclusions more quickly (Libby & Frederick, 1990).

Another stream of research focusses on the impact of executives' personal characteristics on corporate policies leading to firm performance. Specifically, experience is measured through proxies as, for example, CEO age or CEO tenure (Ali & Zhang, 2015; Brookman & Thistle, 2009; Cline & Yore, 2016; Serfling, 2014; Taylor, 1975). Contrasting the findings by Libby and Frederick (1990), as presented above, Taylor (1975) finds that older decision makers tend to take longer to reach decisions. However, this is suggested to result from a tendency to seek broader information, and evaluating this information in depth, before making a decision. Overall, the study finds that age is associated with decision-making performance (Taylor, 1975). Another strand of literature proposes opposing views on the relation between CEO age and risk-taking behaviour. When considering career concerns, it is expected that younger CEOs are more willing to take risks, to signal their quality. Contrarily, older managers may be at a point in their career where financial and career security are more important (Serfling, 2014). The literature confirms the latter. Linking this to the research question at hand,

older audit partners that seek more audit evidence and are more risk averse could be more conservative in filing an unqualified opinion.

Furthermore, considering the stream of research on security analysts' performance, it has been demonstrated that analysts with more firm-specific experience perform better in making earnings forecasts, thus, analysing firm performance (Mikhail et al., 1997). Additionally, Hong and colleagues (2000) find a link between career concerns and herding behaviour. Their findings indicate that more experienced security analysts more easily make bold predictions. Following this theory, rather than accept the client's financial statements, more experienced auditors may more easily refute misstatements.

Lastly, more specific research has been performed on auditor characteristics and their effects on audit quality. Empirical evidence has found it to be likely that personal traits of an auditor have an influence on the outcome of the audit, thus the quality. Examples are the level of education, demographics and whether the auditor has Big *N* firm experience (Gul et al., 2013). Additionally, it has been found that contagion of bad performance, i.e. audit failure, is less likely to occur for auditors with more experience (Li et al., 2017).

Concluding on the previous literature presented above, the following hypothesis is formed:

Hypothesis 1: An engagement partner's auditing experience is positively related to audit quality.

2.2 Perceived Audit Quality

When looking at the demand perspective of auditing, information asymmetry between company insiders and investors gives rise to this demand for audits. The risk that an agent (i.e., company management) will pursue its self-interest at the expense of a principal (i.e., investor) is a moral hazard, which is created by information asymmetry between said agent and principal (Watts & Zimmerman, 1983). Agency theory describes that it is beneficial for both parties to reduce moral hazards and make arrangements to align their interests. In the case of an investor as principal and a company's management as agent, an independent audit is such an arrangement. The auditor gives credibility to the information provided by the company, reducing information asymmetry. The greater the agency conflict between management and investor, the higher the demand for highly perceived audit quality. Building on this theory, it can be stated that higher audit quality, hence, more credible financial statements, reduces agency costs (DeFond, 1992). The reputation of the performing auditors determines how the

quality of the audit is perceived (Watkins et al., 2004), thus, by what margin agency costs are reduced. It has been found that when agency costs between owners and managers of a firm are higher, owners tend to discount their initial investment. This leads to a demand of higher quality audits (Francis & Wilson, 1988), suggesting that when financial information is perceived to be more informative, a positive reaction from investors is anticipated.

A link can be drawn between the agency theory and investor protection, in which the auditor is seen as a measure to protect the investor. When raising external capital, firms give rise to the demand for auditors in order to give assurance to investors of limited expropriations. Variations in auditor liability lead to variations in effectiveness of auditor reporting (Newman et al., 2005). In other words, audit quality may differ across different jurisdictions because of the varying risks of litigation. Newman and colleagues (2005) find that when auditor liability increases, total investment also increases. This indicates that investors rely heavily on audit information to value a firms prospective. Similar conclusions can be drawn from research on audit failures. After the Enron audit failure the perceived audit quality of Arthur Andersen's auditors took a hit. Consequently, investors lowered their perception of audits performed for other clients of Arthur Andersen, resulting in a negative stock market reaction (Chaney & Philipich, 2002).

Supporting theory and evidence has been found to the indication that investors rely on audit information. For example, models are made in which the value of an initial public offering (IPO) is an increasing function of audit quality, finding that under-pricing is less severe when higher quality auditors are employed (Balvers et al., 1988; Datar et al., 1991; Titman & Trueman, 1986). Additionally, Teoh and Wong (1993) find that auditor reputation has an effect on the market response to unexpected earnings, finding that the earnings response coefficient is larger for firms that engage big 8 auditors. Moreover, it is found that, when audit firms take on the insurance role, the bankruptcy of an audit firm is seen as inability to provide insurance, thus, leading to a negative stock market reaction (Menon & Williams, 1994). Summarizing, Chaney and Philipich (2002) suggest that investors actually consider audit quality in their decision-making, and, adjusting the decision-making process for varying levels of audit quality.

Making the assumption that the number of years of auditing experience, in fact, is a determinant of actual audit quality, a relationship can be established between this factor and the investors' response as a proxy for perceived audit quality. It has been argued, however, that the costs of assessing the quality of an audit are too high, leading to the users of an audit to develop a substitute for audit quality. In other words, investors may rely on a different, non-costly to

observe, variable to measure audit quality rather than the actual audit procedures or outcome. For example, audit firm size can be one such alternative (DeAngelo, 1981). Evidence is found for this to be true for auditors' personal characteristics by Christensen and colleagues (2016). Specifically, they find that investors often define audit quality as "well-trained and competent auditors". Moreover, answering the question of what an important contributor to audit quality is, expertise and specific experience are scored highly by investors (Christensen et al., 2016). The costs of incurring who the audit partner is, and how many years of experience s/he has is relatively low; i.e., it is easily assessable through a company's financial statement and his/hers registration date as chartered accountant can be found in the NBA's register. Therefore, years of experience may be used as a surrogate of audit quality.

Evaluating the literature presented, the following hypothesis is derived:

Hypothesis 2: An engagement partner's auditing experience is positively related to perceived audit quality.

3. Research Design

3.1 Data collection and sample

For the sample, information is collected on Dutch listed firms. This amounts to 93 firms in total. Data is collected over the years 2014 through 2020 (n=602). The firms' financial information is obtained from the COMPUSTAT database. Financial data from 2014 is collected in order to calculate the discretionary accruals for year 2015, this calculation is further elaborated below. Earnings announcement dates and daily stock prices are obtained from Thomson Reuters Datastream. The information on years of partner experience is collected manually. The names of the signing auditors are obtained from the annual reports as published by the respective firms. In the Dutch register for chartered accountants maintained by the NBA the registration date of the signing auditor was collected. Firms in the financial services industries are excluded from the analyses (i.e. standard industrial classification (SIC) codes 6000 – 6799). Firm years with missing financial statement data or stock price data are excluded from the analyses, leaving a sample of 369 firm years with 73 unique firms. The raw COMPUSTAT firm data is Winsorized in order to handle extreme outliers as these may induce biased results. Table 1 presents the sampling procedure and the sample distribution by years of experience.

Table 1. Sample Selection and Sample Distribution

Panel A. Sample Selection Procedure

Sampling Procedure	N
Dutch listed firms from 2014 to 2020	602
Less: Financial Services firms (SIC codes 6000 – 6799)	(97)
Sample to calculate Discretionary Accruals	505
Less: cases with missing values of Discretionary accruals	(107)
Less: cases with missing values of Price Change	(29)
Final sample	369

Panel B. Sample Distribution per Years of Experience

Experience	Freq.	Percent	Cum.	Experience	Freq.	Percent	Cum.
0	5	1.36	1.36	21	28	7.59	59.35
5	4	1.08	2.44	22	12	3.25	62.60
6	4	1.08	3.52	23	16	4.34	66.94
7	10	2.71	6.23	24	15	4.07	71.00
8	9	2.44	8.67	25	13	3.52	74.53
9	2	0.54	9.21	26	17	4.61	79.13
10	5	1.36	10.57	27	21	5.69	84.82
11	5	1.36	11.92	28	17	4.61	89.43
12	11	2.98	14.91	29	13	3.52	92.95
13	13	3.52	18.43	30	9	2.44	95.39
14	9	2.44	20.87	31	4	1.08	96.48
15	11	2.98	23.85	33	3	0.81	97.29
16	20	5.42	29.27	34	3	0.81	98.10
17	17	4.61	33.88	35	3	0.81	98.92
18	20	5.42	39.30	36	2	0.54	99.46
19	18	4.88	44.17	37	2	0.54	100.0
20	28	7.59	51.76				
Total	191				369		

Table 1, panel A describes the sample selection procedure. Panel B displays the sample distribution sorted by years of experience.

3.2 Empirical model

Similar to Gul and colleagues (2013) a methodology is developed in which individual auditor effects are estimated. Additionally, control variables are added for non-individual auditor factors that might influence the audit quality. For the different dependent measures a version of the following ordinary least squares model is estimated:

$$y_{it} = \alpha_{it} + \beta_1 Experience_{it} + \beta_2 Big4_{it} + \beta \sum Client_{it} + \varepsilon_{it} \qquad (1)$$

i is the index for each client and *t* is the index for each year observation. The main variable of interest is $Experience_{it,}$ of which the coefficient will measure the effect of years of audit experience on the dependent variable y_{it}. The different dependent variables will be further defined below. The variable $Big4_{it}$ is an indicator for the audit firm and $Client_{it}$ is a set of client firm related control variables. ε_{it} is the error term of the regression. Additionally, the regressions will be extended by year and industry fixed effects.

3.3 Dependent variables

Discretionary accruals

Following previous literature audit quality is measured through a proxy for earnings management; i.e. discretionary accrual. A modified version of the Jones model (Dechow et al., 1995) is used to estimate discretionary accruals. The modified Jones model used is as follows:

$$TA_{it} = \frac{1}{Assets_{it-1}} + \frac{\Delta Revenue_{it} - \Delta Accounts\ Receivable_{it}}{Assets_{it-1}} + \frac{PPE_{it}}{Assets_{it-1}} + \varepsilon_{it} \qquad (2)$$

Where *i* and *t* are indices for each firm and year specific observation, respectively. $Assets_{it-1}$ are the reported amount of assets at the end of the previous year. The calculation of accruals is scaled by this term to scale the outcome to firm size. The change in sales used is net of the change in accounts receivable which mitigates unrealistically large amounts of discretionary accruals due to extreme firm growth (Kothari et al., 2005). This is represented by the term $\Delta Revenue_{it} - \Delta Accounts\ Receivable_{it}$. PPE_{it} is the amount of Plant, Property and Equipment. Total accruals, TA_{it}, are calculated following the cash flow approach as:

$$Total\ Accruals = Net\ Income - Cash\ Flows\ from\ Operating\ Activites \qquad (3)$$

Discretionary accruals can be calculated in relation to total accruals and non-discretionary accruals:

$$Total\ Accruals\ (TA) = Non - discretionary\ Accruals\ (NDA) + Discretionary\ Accruals (DA) \qquad (4)$$

Rewriting this gives the following equation for discretionary accruals:

$$DA = TA - NDA \tag{5}$$

Following the Jones model and as explained by Fang and colleagues (2016) the normal accruals (i.e. non-discretionary accruals) are computed as:

$$NDA = \frac{1}{Assets_{it-1}} + \frac{\Delta Revenue_{it} - \Delta Accounts\ Receivable_{it}}{Assets_{it-1}} + \frac{PPE_{it}}{Assets_{it-1}} \tag{6}$$

Following this approach and using (2), discretionary accruals are estimated as the residual of the Jones model regression, ε_{it} . Since earnings are managed upwards as well as downwards discretionary accruals take both positive and negative values, respectively. Hence, the absolute magnitude of discretionary accruals is taken to evaluate whether partner experience changes the overall level of earnings management.

Earnings Response

To estimate whether earnings quality is perceived differently with different levels of auditor experience the differences in the stock price change are evaluated. In order to scale for the differences in stock price of the different firms the relative price change is used. Building on the assumption that new earnings information is rapidly incorporated in the stock price (Nichols & Wahlen, 2004), the price change is calculated over three days surrounding a firm's annual earnings announcement. The variable is constructed as follows:

$$\%\ Price\ Change_{it} = \frac{NewPrice_{it} - OldPrice_{it}}{OldPrice_{it}} * 100 \tag{7}$$

Where *i* and *t* are firm and year indicators, respectively. $OldPrice_{it}$ is the closing price per share the day prior to the publication of the respective year's annual report. $NewPrice_{it}$ is the closing price per share on the day after the annual earnings announcement. As laid out by Karpoff (1987), there is evidence that stock trading volumes are correlated with the absolute stock price change. Additionally, earnings announcements may commence either a positive or negative price change. Therefore, the absolute level of the percentage price change is taken. This allows the estimation of the effect of auditor experience on the perceived quality of the financial reports.

3.4 Independent variable

The main independent variable of all analyses is $Experience_{it}$. This variable can be explained as the number of years of work experience an auditor has. Dutch law mandates that the audit report must be signed by the responsible engagement partner, including his/her name to enhance credibility. The auditor's registration date as chartered accountant can be taken as the starting point of a career as fully educated accountant. To calculate the number of years of experience the registration year is subtracted from the fiscal year of the corresponding firm year observation. In short, $Experience_{it}$ is the years of experience the signing auditor has in a specific firm year. For firm years where the independent auditor report was missing from the annual report, the value of experience years is taken as zero.

For the set of analyses testing, the sample is median split based on auditor experience. This creates a group of auditors with relatively low experience (n = 191) and a group with relatively high experience (n = 178). For both dependent variables regressions are performed across the groups after which the difference in the coefficients $\beta_1$of $Experience_{it}$ are tested for significance using a Wald test.

3.5 Control variables

As introduced in the empirical model section, several control variables are added to the analyses. Firstly, as previous literature has found that big four audit firms (i.e. Deloitte, PricewaterhouseCoopers, Ernst & Young and KPMG) deliver higher quality audits (e.g. Bills et al., 2016; Becker et al., 1998; DeAngelo, 1981) , the control variable $Big4_{it}$ is included. $Big4_{it}$takes a value of 1 if the signing auditor works for a big four and 0 otherwise. Furthermore, an additional analysis is made with an interaction term of $Big4_{it}$ and $Auditor_{it}$ to investigate whether experience working for a big four firm leads to a difference in quality compared to non-big four experience.

Additionally, to control for client firm characteristics that may influence the level of earnings management, a number of client firm related variables are included. Firstly, the amount of total assets is included to control for firm size. The natural log of total assets is used to make the variable comparable through the analyses. Secondly, a dummy variable for loss making firms is added, because firms that make a loss may be incentivised to manage earnings upward. $Loss_{it}$ takes a value of 1 if the corresponding firm's net income is negative and 0 otherwise. Similarly, firms that make a loss may have incentives to manage earnings upward in the following year as compensation. Therefore, $Loss_{it-1}$ is included, taking a value of 1 if a firm's previous year's net income was negative and 0 otherwise. Moreover, return on assets (ROA) is

included as an additional control for firm performance. ROA is calculated as net income over the average value of assets. The last firm specific control variable is $Leverage_{it}$, which is calculated as the reported total liabilities over total assets.

Finally, regressions are performed including variables controlling for year and industry fixed effects. To clarify, industry fixed effects are analysed based on the first two digits of the firms' corresponding SIC codes.

4. Results

4.1 Descriptive statistics

Table 2 presents the descriptive statistics of all variables. The table shows that the mean experience of the signing auditors is 20 (*SD* = 7.21) years since their registration date as a chartered accountant. Of the 369 firm years, client firms employed a big four audit firm in 330 cases (89.4%). In five cases client firms failed to employ an independent auditor. This is explained by the fact that non-big four firms are ceasing their license of auditing listed firms. Additionally, Dutch big four firms have been reluctant to take on new listed clients.

The mean value of yearly discretionary accruals are -0.024 (*SD* = 0.135). This indicates that earnings are more often or more aggressively managed downwards. Moreover, on average the price of outstanding shares decreased by 0.21% (*SD* = 6.58%) after the annual earnings announcement.

Furthermore, looking at the firm characteristics, the mean net income over the sample period is 184.52 (*SD* = 358.67) and in 81 cases (22%) firms made a loss. The variable Lagged_Loss indicates that 18.7% of the observations made a loss in the prior year. The mean value of total assets is 5227.73 (*SD* = 9370.02) resulting in a ROA with a mean of 1.89% (*SD* = 15.64%). The 369 observations are on average 57.7% (*SD* = 19.6%) leveraged.

4.2 Discretionary Accruals

Table 3 presents the results of the regressions with absolute discretionary accruals as dependent variable. In none of the regressions multicollinearity is found between variables. Analysing the variable of interest *Experience*, the expected result was a negative coefficient. The results are not line with this expectation in all four regression models. Moreover, the resulting coefficients of the variable of interest are not significant at the 1%, 5% and 10% level. Therefore, the hypothesis that more experience as an auditor positively influences audit quality must be rejected. The low R-squared in the models indicates that only a small portion of the

Table 2. Descriptive Statistics

	N	Mean	Median	Std. Dev.	p25	p75
Discretionary Accruals	369	-0.024	-0.022	0.135	-0.054	0.013
Stock Price Change	369	-0.215	0.000	6.581	-3.783	3.190
Experience	369	20.014	20.000	7.212	16.000	26.000
Big 4	369	0.894	1.000	0.308	1.000	1.000
Net Income	369	184.519	20.489	358.666	1.186	182.000
Assets Total	369	5227.729	874.953	9370.023	143.617	5114.500
Ln(Total Assets)	369	6.654	6.774	2.409	4.967	8.540
ROA	369	0.020	0.041	0.139	0.006	0.070
Loss	369	0.220	0.000	0.414	0.000	0.000
Lagged Loss	369	0.187	0.000	0.390	0.000	0.000
Leverage	369	0.577	0.569	0.196	0.465	0.694

Table 2 provides the descriptive statistics of all test variables. Detailed variable descriptions are provided in *Appendix B.*

Table 3. The Effect of Experience on Absolute Discretionary Accruals

Dependent Variable = ADA	(1)	(2)	(3)	(4)
Experience	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.002)	(0.002)
Big 4	-0.001	-0.003	0.002	0.000
	(0.029)	(0.029)	(0.028)	(0.028)
Ln(Total Assets)	-0.011**	-0.011**	-0.010**	-0.010**
	(0.004)	(0.004)	(0.004)	(0.004)
ROA	0.114	0.113	0.114	0.114
	(0.381)	(0.382)	(0.379)	(0.380)
Loss	0.037	0.036	0.039	0.038
	(0.049)	(0.050)	(0.050)	(0.050)
Lagged_Loss	0.065	0.064	0.068	0.067
	(0.041)	(0.042)	(0.042)	(0.042)
Leverage	0.015	0.014	0.020	0.019
	(0.044)	(0.043)	(0.043)	(0.043)
Constant	0.086***	0.076***	0.042	0.034
	(0.025)	(0.029)	(0.032)	(0.034)
Observations	369	369	369	369
R-squared	0.133	0.134	0.143	0.144
Year Fixed Effects	No	Yes	No	Yes
Industry Fixed Effects	No	No	Yes	Yes

Table 3 provides the results of the following regression model:

$$ADA_{it} = \alpha_{it} + \beta_1 Experience_{it} + \beta_2 Big4_{it} + \beta \sum Client_{it} + \varepsilon_{it}$$

The dependent variable ADA_{it} is the amount of absolute discretionary accruals of firm *i* in year *t.* $Experience_{it}$ is the number of years of experience the corresponding auditor has. $Big4_{it}$ is the control variable for an auditor working for a big four firm. $\sum Client_{it}$ is the sum of the client firm related control variables. Detailed variable descriptions are provided in *Appendix B.* Robust standard errors are in parentheses. *** p<.01, ** p<.05, * p<.1

Table 4. The Effect of Experience on Absolute Discretionary Accruals; Split Sample

Panel A. Regression Results

Dependent Variable = ADA	EXP = Low	EXP = High
	(1)	(2)
Experience	-0.001	0.001
	(0.001)	(0.002)
Big 4	0.034	-0.117
	(0.022)	(0.113)
Ln(Total Assets)	-0.005*	-0.013***
	(0.003)	(0.005)
ROA	-0.467***	0.498
	(0.143)	(0.351)
Loss	-0.043*	0.097**
	(0.024)	(0.046)
Lagged_Loss	0.025	0.081*
	(0.026)	(0.048)
Leverage	0.033	-0.040
	(0.039)	(0.047)
Constant	0.055*	0.236
	(0.032)	(0.161)
Observations	191	178
R-squared	0.356	0.429
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes

Panel B. The Difference in Discretionary Accruals Between Low Experience and High Experience

Models	Coeff. Low	Coeff. High	Difference	X^2
Low against High	-0.001	0.001	0.002	0.571

Table 4, panel A provides the results of the following regression model, with the sample split into low and high audit quality:

$$ADA_{it} = \alpha_{it} + \beta_1 Experience_{it} + \beta_2 Big4_{it} + \beta \sum Client_{it} + \varepsilon_{it}$$

The dependent variable ADA_{it} is the amount of absolute discretionary accruals of firm *i* in year *t.* $Experience_{it}$ is the number of years of experience the corresponding auditor has. $Big4_{it}$ is the control variable for an auditor working for a big four firm. $\sum Client_{it}$ is the sum of the client firm related control variables. Robust standard errors are in parentheses. Detailed variable descriptions are provided in *Appendix B.* Table 4, panel B provides the results of the Wald tests performed on the difference in coefficients of $Experience_{it}$ between the regressions on the low and high experience groups. *** p<.01, ** p<.05, * p<.1

variability in discretionary accruals is explained by the variables included in the model. In model (3) and (4) which include industry fixed effects, the R-squared is slightly higher.

However not significant, model (1) and (2) indicate a negative association between big four audit firms. This can suggest that, indeed, audit quality is determined by the audit firm employed rather than the individual signing partner. Additionally, it can explain that the team of auditors working on an engagement establishes quality instead of one individual.

One of the five client firm associated control variables is found to have a significant effect on discretionary accruals. Firm size as measured through the log of total assets is found to have a significant effect on the discretionary accruals. Specifically, when a firm is larger in terms of assets, discretionary accruals are significantly lower ($p < 0.05$) according to all four models. Contrarily, leverage has not been found to have a significant effect on discretionary accruals. Moreover, firm performance as measured by ROA has no significant effect on the level of discretionary accruals. Additionally, firms making a loss in the current year do not significantly manage earnings differently. Similarly, firms that made a loss in the previous year are found not found to have significantly different levels of discretionary accruals.

Panel A of Table 4 presents the regression results of the analyses of the effect of experience on discretionary accruals for the split samples. Again, for neither low experience levels nor high experience levels an effect of the years of experience on discretionary accruals is found. Panel B reports the test results of the difference in coefficients. The difference in effect is not found to be significant ($p = 0.571$). In other words, auditors with more experience do not have a stronger influence on their clients discretionary accruals than auditors with low experience.

4.3 Earnings Response

Table 5 shows the results of the second set of regressions which analyse the relation between auditor experience and the investors' response to the annual earnings announcements. When tested, none of the models show signs of multicollinearity among variables. In all models the direction of the sign on the independent variable *Experience* is in line with the expectation. The positive sign indicates that investors perceive the quality of earnings statements higher when a more experienced auditor has signed the report. However, this effect is not significant.

From the regression results, it can be concluded that the stock price change of a client firm audited by a big four firm is more than 2.2 ($p < 0.05$) percentage points larger than for firms not audited by big four auditors. The difference in significance between *Experience* and *Big 4* may indicate that investors' decision-making is influenced by the auditor, however, not

Table 5. The Effect of Experience on Absolute Stock Price Change

Dependent Variable = APC	(1)	(2)	(3)	(4)
Experience	0.024	0.020	0.024	0.024
	(0.041)	(0.036)	(0.037)	(0.037)
Big 4	2.313**	2.295**	2.289**	2.313**
	(1.002)	(0.897)	(0.901)	(0.905)
Ln(Total Assets)	-0.055	-0.056	-0.056	-0.055
	(0.140)	(0.129)	(0.128)	(0.129)
ROA	4.258*	4.253*	4.251*	4.258*
	(2.216)	(2.342)	(2.329)	(2.325)
Loss	0.645	0.631	0.632	0.645
	(0.794)	(0.835)	(0.825)	(0.839)
Lagged_Loss	2.216***	2.197***	2.209***	2.216***
	(0.760)	(0.786)	(0.773)	(0.779)
Leverage	1.876	1.844	1.857	1.876
	(1.311)	(1.224)	(1.222)	(1.231)
Constant	0.776	1.054	0.667	0.776
	(1.581)	(1.136)	(1.391)	(1.546)
Observations	369	369	369	369
R-squared	0.049	0.048	0.049	0.049
Year Fixed Effects	Yes	Yes	No	Yes
Industry Fixed Effects	Yes	No	Yes	Yes

Table 5 provides the results of the following regression model:

$$APC_{it} = \alpha_{it} + \beta_1 Experience_{it} + \beta_2 Big4_{it} + \beta \sum Client_{it} + \varepsilon_{it}$$

The dependent variable APC_{it} is the absolute percentage change of the stock price of firm *i* in year *t* following the annual earnings announcement. $Experience_{it}$ is the number of years of experience the corresponding auditor has. $Big4_{it}$ is the control variable for an auditor working for a big four firm. $\sum Client_{it}$ is the sum of the client firm related control variables. Detailed variable descriptions are provided in *Appendix B.* Robust standard errors are in parentheses. *** p<.01, ** p<.05, * p<.1

by the individual signing the audit report. Moreover, firms with a higher *ROA* ($p < 0.1$) and/or made a loss in the previous year ($p < 0.01$) experience a significantly larger earnings response, all else equal.

Table 6 presents the results of the Wald test that is performed to test for differences in earnings response between different experience groups. Against expectation, the earnings coefficient for low experience auditors is larger than for auditors with more experience. This unexpected decrease in earnings response, however, is not significant ($p = 0.434$).

In the full sample the coefficient of *Experience* on the absolute stock price change has been found insignificant. Furthermore, no significant differences between groups of auditors with similar experience are found. Hence, the second hypothesis is rejected as no positive relationship between auditor experience and stock market response is found.

Table 6. The Effect of Experience on Absolute Stock Price Change; Split Sample

Panel A. Regression Results

Dependent Variable = APC	*EXP =Low*	*EXP = High*
	(1)	(2)
Experience	0.058	-0.025
	(0.071)	(0.083)
Big 4	2.702**	1.205
	(1.315)	(1.429)
Ln(Total Assets)	-0.116	0.033
	(0.204)	(0.176)
ROA	1.761	6.283***
	(4.364)	(2.263)
Loss	0.950	0.033
	(1.139)	(1.497)
Lagged_Loss	1.806*	2.480**
	(0.996)	(1.224)
Leverage	2.599	1.009
	(1.945)	(1.725)
Constant	-0.610	3.621
	(2.162)	(3.324)
Observations	191	178
R-squared	0.068	0.054
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes

Panel B. The Difference in Earnings Response Between Low Experience and High Experience

Models	Coeff. Low	Coeff. High	Difference	X^2
Low against High	0.058	-0.025	-0.083	0.434

Table 5, panel A provides the results of the following regression model, with the sample split into low and high audit quality:

$$APC_{it} = \alpha_{it} + \beta_1 Experience_{it} + \beta_2 Big4_{it} + \beta \sum Client_{it} + \varepsilon_{it}$$

The dependent variable APC_{it} is the absolute percentage change of the stock price of firm *i* in year *t*. $Experience_{it}$ is the number of years of experience the corresponding auditor has. $Big4_{it}$ is the control variable for an auditor working for a big four firm. $\sum Client_{it}$ is the sum of the client firm related control variables. Robust standard errors are in parentheses. Detailed variable descriptions are provided in *Appendix B.* Table 5, panel B provides the results of the Wald tests performed on the difference in coefficients of $Experience_{it}$ between the regressions on the low and high experience groups. *** p<.01, ** p<.05, * p<.1

Table 7. The Effect of Big Four Experience on Absolute Discretionary Accruals

Panel A. Regression Results

Dependent Variable = ADA	*Full Sample* (1)	*EXP = Low* (2)	*EXP = High* (3)
Experience	0.012	0.000	0.378***
	(0.008)	(0.002)	(0.034)
Big 4	0.137*	0.051	8.088***
	(0.079)	(0.041)	(0.721)
Experience * Big 4	-0.012	-0.001	-0.380***
	(0.008)	(0.003)	(0.034)
Ln(Total Assets)	-0.009***	-0.004	-0.006***
	(0.003)	(0.003)	(0.002)
ROA	0.068	-0.468***	-0.233*
	(0.335)	(0.143)	(0.135)
Loss	0.032	-0.043*	0.006
	(0.045)	(0.024)	(0.017)
Lagged_Loss	0.068*	0.026	-0.000
	(0.040)	(0.026)	(0.018)
Leverage	0.019	0.032	-0.009
	(0.041)	(0.040)	(0.028)
Constant	-0.063	0.048	-7.966***
	(0.080)	(0.033)	(0.704)
Observations	369	191	178
R-squared	0.187	0.357	0.858
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes

Panel B. The Difference in Earnings Response Between Low Big Four Experience and High Big Four Experience

Models	Coeff. Low	Coeff. High	Difference	Wald tstat.
Low against High	-0.001	-0.380	-0.379	0.000***

Table 7, panel A provides the results of the following regression model, with the sample split into low and high audit quality:

$$ADA_{it} = \alpha_{it} + \beta_1 Experience_{it} + \beta_2 Big4_{it} + \beta_3 Experience * Big4_{it} + \beta \sum Client_{it} + \varepsilon_{it}$$

The dependent variable ADA_{it} is the amount of absolute discretionary accruals of firm *i* in year *t.* $Experience_{it}$ is the number of years of experience the corresponding auditor has. $Big4_{it}$ is the control variable for an auditor working for a big four firm. $Experience * Big4_{it}$ is the interaction term of interest. $\sum Client_{it}$ is the sum of the client firm related control variables. Robust standard errors are in parentheses. Detailed variable descriptions are provided in *Appendix B.* Table 7, panel B provides the results of the Wald tests performed on the difference in coefficients of $Experience_{it}$ between the regressions on the low and high experience groups. *** p<.01, ** p<.05, * p<.1

Table 8. The Effect of Big Four Experience on Absolute Stock Price Change

Panel A. Regression Results

Dependent Variable = APC	*Full Sample* (1)	*EXP = Low* (2)	*EXP = High* (3)
Experience	0.052	-0.014	1.618**
	(0.105)	(0.072)	(0.816)
Big 4	2.692	1.435	36.879**
	(1.638)	(2.220)	(17.604)
Experience * Big 4	-0.034	0.116	-1.651**
	(0.116)	(0.138)	(0.821)
Ln(Total Assets)	-0.051	-0.121	0.063
	(0.141)	(0.205)	(0.176)
ROA	4.132*	1.792	3.108
	(2.260)	(4.285)	(3.041)
Loss	0.629	0.934	-0.362
	(0.797)	(1.129)	(1.578)
Lagged_Loss	2.216***	1.779*	2.126*
	(0.761)	(1.000)	(1.257)
Leverage	1.877	2.680	1.144
	(1.313)	(1.972)	(1.720)
Constant	0.509	-0.059	-32.036*
	(1.828)	(2.022)	(17.573)
Observations	369	191	178
R-squared	0.049	0.070	0.061
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes

Panel B. The Difference in Earnings Response Between Low Big Four Experience and High Big Four Experience

Models	Coeff. Low	Coeff. High	Difference	X^2
Low against High	0.166	-1.651	-1.817	0.029**

Table 8, panel A provides the results of the following regression model, with the sample split into low and high audit quality:

$$APC_{it} = \alpha_{it} + \beta_1 Experience_{it} + \beta_2 Big4_{it} + \beta_3 Experience * Big4_{it} + \beta \sum Client_{it} + \varepsilon_{it}$$

The dependent variable APC_{it} is the absolute percentage change of the stock price of firm *i* in year *t*. $Experience_{it}$ is the number of years of experience the corresponding auditor has. $Big4_{it}$ is the control variable for an auditor working for a big four firm. $Experience * Big4_{it}$ is the interaction term of interest. $\sum Client_{it}$ is the sum of the client firm related control variables. Robust standard errors are in parentheses. Detailed variable descriptions are provided in *Appendix B.* Table 8, panel B provides the results of the Wald tests performed on the difference in coefficients of $Experience_{it}$ between the regressions on the low and high experience groups. *** p<.01, ** p<.05, * p<.1

5. Additional Analyses

Previous literature finds that audits performed by big *N* firms have a higher quality (e.g., Becker et al., 1998; DeAngelo, 1981). This may indicate that there is a difference in knowledge and competence gained between big *N* and non-big *N* audit firms. If this is true, a difference in influence of experience on audit quality can be found. Therefore, an additional analysis is performed. It is an extension of the models used in the base analysis, in which an interaction term between years of experience and the dummy variable *Big 4* is included. Moreover, the differences between the effects of big four experience in the low audit experience group and the high experience group is tested.

The results of the regressions with absolute discretionary accruals as dependent variable are displayed in Table 7. The analyses of the full sample (1) and the sample with auditors with relatively low experience (2) do not result in significant findings for the variables of interest. However, the variable of interest *Experience * Big 4* does have a significant ($p < 0.01$) effect in the third regression. The negative coefficient implies that every extra year of work experience as auditor in a big four firm decreases the absolute amount of discretionary accruals. Interestingly, in model (3) the coefficient for *Experience* is positive and also significant ($p < 0.01$). The magnitude of the coefficient is almost as large as for *Experience * Big 4*, but in the opposing direction. This could mean that there is not much difference in audit quality for experienced auditors working for a big four versus a non-big four.

When analysing the difference in coefficients between low and high audit experience the results, as displayed in Table 7, panel B, are in line with expectations. The coefficient for the high experience group is more negative, this difference is significant ($p < 0.01$). These results imply that within a big four firm audit partners with more experience have a larger effect on the absolute level of discretionary accruals, thus earnings management. Therefore, more experienced auditors within a big four audit firm show better performance when it comes to audit quality.

Table 8, panel A shows the results of the regression on the second dependent variable, absolute price change. Similar to discretionary accruals, the interaction term of interest is not significant in the full sample model (1) and the low experience model (2). Furthermore, the coefficient of *Experience * Big 4* is significant ($p < 0.05$) in the high experience model (3). The direction, however, is not in line with expectations, as it is hypothesized that more experienced auditors lead to a stronger stock market response. The negative sign of the coefficient implies the opposite to be true. Again, Wald tests are performed to analyse the difference in coefficients

of the interaction term *Experience * Big 4*. The results are shown in Table 8, panel B. Similar to the regression results, these findings indicate that firms that employed more experienced auditors faced a smaller stock market response. However, the economic significance of these results are questionable when looking at the coefficient of the variable *Big 4*. The significantly ($p < 0.05$) positive effect of being audited by a big four audit firm contrasts the results of the interaction term. As implied in the main analyses, this indicates that investors make a perception of quality based on the audit firm rather than the signing partner as individual.

6. Discussion

6.1 Audit Quality

The current study investigates whether the number of years of audit experience is positively related to audit quality and the audit quality as perceived by investors. As elaborated above, no evidence is found supporting the hypothesis that more experience as an auditor has a positive effect on audit quality. Though, the findings in the additional analyses may signal that the relationship exists. However, there are numerous explanations that may clarify the findings of the main analysis. Firstly, when relating the findings to the "antecedents and consequences of knowledge" model of Libby (1995), there are several possible explanations. The model states that performance is impacted by the relevance of the knowledge regarding the task at hand. With the work field of auditing changing due to technical innovations, such as data science and machine learning, younger auditors could have more relevant knowledge on new methodologies, diminishing the advantage in performance gained from repetition and experience. This line of thinking can be linked to bias and over-reliance (Bazerman et al., 1997).

This is also the second link to the knowledge model of Libby (1995). When over-reliance on previous experience occurs, more experienced auditors may be reluctant to adapt to new methods of auditing, due to confirmation bias. Therefore, more learning possibilities, as described in the "antecedents and consequences of knowledge" model, could lead to unfounded audit predictions that are in line with previous experience (Libby & Frederick, 1990). This may imply that younger auditors are less biased and, hence, perform better or equally.

Secondly, the argument can be made that younger auditors try to signal their quality by more risk-taking behaviour. Whereas auditors may be at a point in their career where they can be more risk averse as they have already proven their worth (Serfling, 2014). However, this argument can be interpreted differently. As Serfling (2014) performed his research on CEOs, it could be true that auditors signal their quality differently. Namely, audit partners with less experience may try to indicate their worth by being more thorough in their tasks. This may be

done through obtaining more audit evidence and, consequently, being more conservative in filing unqualified audit opinions.

Thirdly, following another line of reasoning, it may still be true that an auditor's personal characteristics, including experience, have an influence on the quality of the audit. For example, it has been found that income increasing accruals are negatively associated with experience (Cahan & Sun, 2015; Wang et al., 2015), as well as an individual's level of education or their demographics (Gul et al., 2013). Naturally, this effect is not limited to audit partners. Therefore, the magnitude of the effect of individual characteristics may be more dependable on the composition of the audit team, rather than the partner.

Furthermore, the context in which individual characteristics such as experience are developed may play a role in the magnitude of the effect. As illustrated by the results of the additional analyses, experience gained in a big four audit firm does have a significant effect on earnings management. This may indicate that the audit quality gains from big four firms, as found by previous research (e.g., Becker et al., 1998; DeAngelo, 1981), are more dominant. In other words, audit quality may be more reliant on firm characteristics than on individual characteristics.

Finally, the lack of results may be caused by the research design. Discretionary accruals models have been criticized as earnings management proxies. For example, problems may occur when only large magnitudes of earnings management are detected. Though the model used in the current paper (Dechow et al., 1995) has been adjusted, for example by Kothari and colleagues (2005), all models suffer from caveats. Another proxy for audit quality may have led to different results. Moreover, since a Dutch sample is used, the number of observations is limited. More observation might have increased the power of the model. It is difficult, however, to shift a similar research to a larger sample, because not many countries require audit partners to sign with their name included.

6.2 Perceived Audit Quality

The hypothesis that investors' perceived quality of audits is affected by the years of experience an auditor has, is also rejected. An explanation may be found in the previous literature. Investors are found to investigate non-costly substitutes to assess audit quality, rather than perform an analysis of this (Christensen et al., 2006; DeAngelo, 1981). The results of this study, however, suggest that years of experience is no such substitute. A reason for this can be that finding this number is still a too lengthy, thus costly, process. Therefore, the perceived quality of an audit could rely more on an auditor's overall reputation among investors.

Similarly, audit firm size (i.e. big four or not) is more likely to be the substitute of choice, as this is easier to find. This is also suggested by the significantly positive coefficient in the analyses.

Additional possible reasons for the absence of results can be found in the setting and design of this research. Namely, listed firms in the Netherlands are obliged to have their annual reports audited by an independent accountant. This could already give assurance to investors. Moreover, there is a limited number of audit firms in the Netherlands that have a license to audit listed companies. This indicates that audit firms need to perform on a certain level of quality when auditing a listed company. Therefore, investors may feel save to trade on the stock market after identifying that the annual reports have been audited.

Furthermore, again the sample size may have played a role in not finding significant results. This caused the quartiles of audit experience to be rather small, making it more difficult to find a significant difference in earnings response.

7. Conclusion

To summarize, this paper studies the relationship between the number of years of audit experience and the audit quality. Furthermore, it is investigated whether investors perceive quality differently when the audit report is signed by a more experienced partner. The proxies used for quality and perceived audit quality are discretionary accruals and earnings response, respectively. The results of the analyses, however, show no significant evidence of such a relationship. Several plausible explanations for these findings are elaborated on in the discussion. Though, the results of the additional analyses do show that experience gained in a big four firm does enhance audit quality (i.e. earnings management is reduced). Nevertheless, no relationship of economic significance is found between big four experience and the magnitude of the stock price change.

As mentioned earlier, audit firms generally have a strict hierarchy in which an accountant is promoted every two to three years. The findings of this study imply that such a promotion time schedule may be superfluous. The competence of an auditor is not found to be related to experience. Thus, it may be more advantageous to give promotions on merit rather than on time. Furthermore, since there is no evidence that experience has an influence on the actual audit quality, the subsequent lack of effect on the perceived quality could be considered as positive. As this implies that investors do not draw unrealistic conclusions on audit features that are no actual indication of quality.

Though no effect of experience on audit quality was found, future research could study other individual characteristics which might influence audit quality. Additionally, it would be interesting to investigate in what way audit team characteristics, thus team composition, affects audit quality.

Lastly, this study has some caveats. Especially, the sample size is small and discretionary accruals as proxy for audit quality has been criticized. Therefore, in a setting where engagement partner characteristics are accessible, future research could replicate this study in a setting with a larger sample. Moreover, similar analyses with a different measure for audit quality may bring about different results.

Appendix A: References

Ali, A., & Zhang, W. (2015). CEO tenure and earnings management. *Journal of Accounting and Economics*, *59*(1), 60-79.

Balvers, R. J., McDonald, B., & Miller, R. E. (1988). Underpricing of new issues and the choice of auditor as a signal of investment banker reputation. *Accounting Review*, 605-622.

Bazerman, M. H., Morgan, K. P., & Loewenstein, G. F. (1997). The impossibility of auditor independence. *Sloan Management Review*, *38*, 89-94.

Bills, K.L., Swanquist, Q.T. and Whited, R.L., 2016. Growing Pains: Audit Quality and Office Growth. *Contemporary Accounting Research* 33, 288–313.

Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, *15*(1), 1-24.

Brookman, J., & Thistle, P. D. (2009). CEO tenure, the risk of termination and firm value. *Journal of Corporate Finance*, *15*(3), 331-344.

Burke, J. J., Hoitash, R., & Hoitash, U. (2019). Audit partner identification and characteristics: Evidence from US Form AP filings. *Auditing: A Journal of Practice & Theory*, *38*(3), 71-94.

Cahan, S. F., & Sun, J. (2015). The effect of audit experience on audit fees and audit quality. *Journal of Accounting, Auditing & Finance*, *30*(1), 78-100.

Chaney, P. K., & Philipich, K. L. (2002). Shredded reputation: The cost of audit failure. *Journal of Accounting Research*, *40*(4), 1221-1245.

Christensen, B. E., Glover, S. M., Omer, T. C., & Shelley, M. K. (2016). Understanding audit quality: Insights from audit professionals and investors. *Contemporary Accounting Research*, *33*(4), 1648-1684.

Clarkson, P. M., & Simunic, D. A. (1994). The association between audit quality, retained ownership, and firm-specific risk in US vs. Canadian IPO markets. *Journal of Accounting and Economics*, *17*(1-2), 207-228.

Cline, B. N., & Yore, A. S. (2016). Silverback CEOs: Age, experience, and firm value. *Journal of Empirical Finance, 35*, 169-188.

Collins, D. W., & Kothari, S. P. (1989). An analysis of intertemporal and cross-sectional determinants of earnings response coefficients. *Journal of Accounting and Economics, 11*(2-3), 143-181.

Datar, S. M., Feltham, G. A., & Hughes, J. S. (1991). The role of audits and audit quality in valuing new issues. *Journal of Accounting and Economics, 14*(1), 3-49.

DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of accounting and economics*, *3*(3), 183-199.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting review*, 193-225.

DeFond, M. L. (1992). The association between changes in client firm agency costs and auditor switching. *Auditing*, *11*(1), 16.

Financial Reporting Council (FRC). 2006. Promoting Audit Quality. Available at: https://www.frc.org.uk/Our-Work/Publications/FRCBoard/Discussion-Paper-Promoting-Audit-Quality.pdf

Francis, J. R., & Wilson, E. R. (1988). Auditor changes: A joint test of theories relating to agency costs and auditor differentiation. *Accounting Review*, 663-682.

Frederick, D. M., & Libby, R. (1986). Expertise and auditors' judgments of conjunctive events. *Journal of Accounting Research*, 270-290.

Ghosh, A., & Moon, D. (2005). Auditor tenure and perceptions of audit quality. *The Accounting Review*, *80*(2), 585-612.

Gul, F. A., Wu, D., & Yang, Z. (2013). Do individual auditors affect audit quality? Evidence from archival data. *The Accounting Review*, *88*(6), 1993-2023.

Hong, H., Kubik, J. D., & Solomon, A. (2000). Security analysts' career concerns and herding of earnings forecasts. *The Rand Journal of Economics*, 121-144.

Johnson, P. E., & Jamal, K. (1987). Human judgment: Limitations and opportunities for research. *Auditor Productivity in the Year 2000: Proceedings of the 1987 Arthur Young Professors' Roundtable*, 83-98.

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, *39*(1), 163-197.

Li, L., Qi, B., Tian, G., & Zhang, G. (2017). The contagion effect of low-quality audits at the level of individual auditors. *The Accounting Review*, *92*(1), 137-163.

Libby, R. (1995). The role of knowledge and memory in audit judgment. *Judgment and Decision-making Research in Accounting and Auditing*, *1*, 176-206.

Libby, R., & Frederick, D. M. (1990). Experience and the ability to explain audit findings. *Journal of Accounting Research*, *28*(2), 348-367.

Mikhail, M. B., Walther, B. R., & Willis, R. H. (1997). Do security analysts improve their performance with experience?. *Journal of Accounting Research*, *35*, 131-157.

Menon, K., & Williams, D. D. (1994). The insurance hypothesis and market prices. *Accounting Review,* 327-342.

Newman, D. P., Patterson, E. R., & Smith, J. R. (2005). The role of auditing in investor protection. *The Accounting Review*, *80*(1), 289-313.

Nichols, D. C., & Wahlen, J. M. (2004). How do earnings numbers relate to stock returns? A review of classic accounting research with updated evidence. *Accounting Horizons*, *18*(4), 263-286.

Public Company Accounting Oversight Board (PCAOB). (2016). Auditor Reporting of Certain Audit Participants. Rule 3211.

Serfling, M. A. (2014). CEO age and the riskiness of corporate policies. *Journal of Corporate Finance*, *25*, 251-273.

Taylor, R. N. (1975). Age and experience as determinants of managerial information processing and decision making performance. *Academy of Management Journal*, *18*(1), 74-81.

Teoh, S. H., & Wong, T. J. (1993). Perceived auditor quality and the earnings response coefficient. *Accounting Review*, 346-366.

Titman, S., & Trueman, B. (1986). Information quality and the valuation of new issues. *Journal of Accounting and Economics, 8*(2), 159-172.

Wang, X., Wang, Y., Yu, L., Zhao, Y., & Zhang, Z. (2015). Engagement audit partner experience and audit quality. *China Journal of Accounting Studies*, *3*(3), 230-253.

Watkins, A. L., Hillison, W., & Morecroft, S. E. (2004). Audit quality: A synthesis of theory and empirical evidence. *Journal of Accounting Literature*, *23*, 153.

Watts, R. L., & Zimmerman, J. L. (1983). Agency problems, auditing, and the theory of the firm: Some evidence. *The Journal of Law and Economics*, *26*(3), 613-633.

Appendix B: Variable Description

Table 9. Variable Descriptions of the Variables Used in Main Analyses

Variable	***Definition***
Absolute Discretionary Accruals	Discretionary Accruals as calculated through the modified Jones Model (Dechow et al., 1995). Absolute magnitude is taken. Source: COMPUSTAT
Absolute Stock Price Change	The price change of a share. The starting price is the closing price the day before the earnings announcement. The change is calculated to the closing price on the day after the earnings announcement. Source: Thomson Reuters Datastream
Experience	The years of experience the signing engagement partner has when signing the annual statements. Source: Nederlandse Beroepsorganisatie van Accountants
Big 4	Takes a value of 1 when the annual reports are audited by a big four audit firm, 0 otherwise. Source: Financial statements of corresponding firm
*Experience * Big 4*	An interaction term between the variables *Experience* and *Big 4* as explained above.
Assets Total	The year ending amount of assets as reported on the financial statements. Source: COMPUSTAT
Ln(Assets Total)	The natural log of the year ending amount of assets as reported on the financial statements. Source: COMPUSTAT
ROA	Return on assets as calculated by net income over average assets. Source: COMPUSTAT
Loss	A dummy variable that takes a value of 1 when the corresponding firm makes a loss, 0 otherwise. Source: COMPUSTAT
Lagged_Loss	A dummy variable that takes a value of 1 when the corresponding firm made a loss in the prior year, 0 otherwise. Source: COMPUSTAT
Leverage	The leverage ratio of a firm. Calculated as total liabilities over total assets. Source: COMPUSTAT