



Master Thesis: Accounting, Auditing and Control

Influence of auditor rotation and engagement disclosure on financial misconduct within firms

Erasmus University Rotterdam – Erasmus School of Economics

Name student: Sophie Smits

Student ID number: 485594

Supervisor: J. Zhang

Second assessor: Dr. Elien Voermans

Date final version: 30-06-2023

Abstract

This study investigates the relationship between audit partner tenure and financial misconduct. Three independent variables were created to measure audit partner tenure. The dependent variable is measured by dollar amount and total number of penalties imposed by a firm. The study found that in the first and last year of an audit partner engagement the number of violations were lower than in the second and fourth year. The findings can be interpreted to indicate that in the last year the audit partner has a deeper understanding of the client's specific information and that in the first year more time is spent understanding the client's operations.

Furthermore, this study found that after engagement disclosure became mandatory, the number of violations was lower, possibly due to the audit partner feeling more responsible when their name is disclosed.

Both findings influence overall audit quality. Mandatory engagement disclosure lowers financial misconduct, improving audit quality. Auditor tenure also influences financial misconduct, improving the audit quality in the first and last year of a partner engagement.

Keywords: Audit quality, Auditor tenure, Auditor independence, Engagement partner disclosure

The content of this thesis is the sole responsibility of the author and does not reflect the view of either the supervisor, second assessor, Erasmus School of Economics or Erasmus University.

Table of Contents

Introduction	1
Literature & Hypothesis Development	4
<i>Audit partner rotation</i>	4
<i>Audit partner engagement disclosure</i>	6
Research Design	9
<i>Data collection</i>	9
<i>Methodology</i>	12
Empirical Results	14
<i>Descriptive statistics</i>	14
<i>Main results</i>	18
Conclusion	24
Reference List	26
Appendix	29

Introduction

In 2017, KPMG was accused of facilitating corruption in South Africa for the Gupta Family, for whom they served as the auditor for 15 years. KPMG faced allegations of having a too close relationship with the Gupta family, as at least four partners from KPMG were present at a Gupta wedding, where the family allegedly evaded paying income tax (Shoaib, 2017). The KPMG scandal and many other related scandals have raised concern about auditor independence, which is an essential factor in ensuring the integrity and accuracy of financial reporting. The auditor is responsible for reviewing the financial statements and detecting potential financial fraud.

The KPMG scandal and other similar incidents have led to questions about the professionalism of auditors, particularly concerning auditor independence and its influence on audit quality. This has started an ongoing debate among regulators about how to protect auditor independence to retain audit quality and public trust in auditors. To address this matter, the Public Company Accounting Oversight Board (PCAOB) has implemented rules for auditors, such as avoiding bias and discouraging having a close relationship with management. One such rule prohibits auditors from accepting gifts from their audit clients (AS 1005: Independence, n.d.). However, regulators are also concerned that audit independence may diminish as audit tenure increases. This is because the audit partners become too familiar with the management or the business, resulting in the neglect of negative aspects of the firm (Muslim et al. 2020). Nevertheless, switching to a new audit firm or partner can be costly and time-consuming, and may result in the loss of valuable client-audit information. Thus, the question remains which is more important: maintaining auditor independence or retaining valuable client-audit information.

The effects of audit tenure and audit partner tenure have been extensively examined before, but the results are conflicting. Davis et al. (2007) found that auditor tenure is one of the underlying reasons for various negative aspects, such as earnings management, audit quality, and client pressure. However, they also noted that switching auditors has its own costs, and regulators must determine whether these outweigh the costs of decreased auditor independence. Garcia-Blandon et al. (2020) support this research. They state that audit partner tenure is a significant factor in determining audit quality. As audit partner tenure goes up, the audit quality decreases. However, this is not the case for audit firm tenure, as audit quality actually tends to increase with increased audit firm tenure. This finding is partially in agreement with Chen et al. (2008), who suggested that audit tenure may not decrease, and in some cases may even increase, auditor independence due to a better understanding of the business. These conflicting results have led to a discussion between policymakers and stakeholders about the ideal level of audit firm and audit partner tenure.

As a result of the extensive research on audit tenure, the European Union and some other countries have established mandatory audit firm rotation with a maximum duration of 10 years (Mandatory Rotation of Auditors: Streamlining European Countries' Audit Rules,

2022). However, the question remains whether mandatory auditor rotation is necessary given the conflicting results of past research. As of right now the European Union does not have rules about audit partner rotation, in contrast to the United States of America. The United States do not have mandatory auditor rotation, but instead they have a maximum tenure of an audit partner, namely 5 years. This became effective in 2003 (Bostrom, 2022).

Mandatory audit partner rotation must prevent the building of a close relationship between a firm's management and its audit partners, which might damage independence and accuracy. The Public Company Accounting Oversight Board (PCAOB) implemented a new rule in 2017, which requires firms to disclose the audit partner name (Abbott et al., 2022). The purpose of this new regulation is to increase transparency and accountability. However, the introduction of this rule started a debate on whether disclosing the partner's name would actually enhance audit quality. Burke, Hoitash, and Hoitash (2019) found a significant increase in audit quality when firms had to disclose their audit partner. The audit delay became shorter and the audit quality and audit fees increased. However, Cunningham et al. (2019) did not find any significant increase or decrease in audit quality, suggesting that the impact of the rule is limited to only specific dimensions of audit quality and/or specific company characteristics.

A lot of research has been done on the impact of audit partner tenure and several other factors, for example, earnings management and client pressure. However, there is no research yet done on the combination between audit partner tenure and the misconduct conducted by a firm. Firm- and facility-level misconduct has mainly been researched in combination with internal management control. Heese & Pérez-Cavazos (2020) found a negative relationship between facility-level misconduct and headquarter visits, meaning that the misconduct decreased as the number of headquarter visits increased. In another study, Heese & Perez-Cavazos (2021) found that when retaliation costs increased, the amount of misconduct in a firm increased, especially in firms with weaker internal control systems.

Although the effects of audit partner tenure have been researched in multiple ways, the research has not yet extended to the misconduct committed by firms. Since auditors and audit firms are responsible for having accurate financial statements and detecting fraudulent activities, it is possible that prolonged relationships between auditors and firms may lead to financial misconduct. Potential financial misconduct could include tax violations and anti-money-laundering deficiencies. All of this should and can be detected by the auditor. Failure to detect such misconduct may indicate a lack of accuracy, weakened audit quality, and diminished auditor independence. This is a critical concern for stakeholders who rely on accurate information, and for the public, who need to trust in the credibility of auditors' reports. Regulators also need to understand the potential impact of audit partner tenure on auditor independence and whether it can effectively reduce financial misconduct in firms. Therefore, the research question is:

Does audit partner tenure and disclosure influence firm-level financial misconduct?

To answer the research question, three independent variables were created to measure audit partner tenure. The dependent variable is measured by the dollar amount and total number of penalties imposed by a firm. After selecting and merging, a total sample of 32,523 remains for the years 2017–2023. A multivariate regression is done to research the effect of auditor tenure on financial misconduct. Besides this, a quasi-experimental design study is conducted to see if mandatory audit partner disclosure influences financial misconduct and thereby influences audit quality. This is tested for the years 2011–2022. 6 years before and 6 years after the mandatory audit partner disclosure rule became effective.

The study found that in the first and last years of an audit partner engagement, the number of violations was lower than in the second and fourth years. The findings can be interpreted to indicate that in the last year, the audit partner has a deeper understanding of the client's specific information and that in the first year, more time is spent understanding the client's operations.

Furthermore, this study found that after engagement disclosure became mandatory, the number of violations was lower, possibly due to the audit partner feeling more responsible when their name was disclosed. Both findings influence overall audit quality. Mandatory engagement disclosure lowers financial misconduct, improving audit quality. Auditor tenure also influences financial misconduct, improving audit quality in the first and last years of a partner engagement.

Financial misconduct is a sign of improved audit quality in both results. The temporal aspect of auditor rotation as well as the importance of independence are both examined. With the outcome that audit partner tenure does influence financial misconduct and that the effect is more significant when the audit partner name is disclosed, the findings have the potential to help regulators form new regulations and assess the current ones. Ultimately, the study aims to benefit a wide range of stakeholders, including regulators, auditors, and those who rely on accurate and reliable financial information for decision-making purposes.

This research still has some limitations. The sample size of the Violation Tracker dataset is quite small compared to the Audit Tenure dataset. Besides, this study only encompasses the United States of America, which may not be representative of other continents. Furthermore, the timeframe is relatively small. Lastly, there may also be external factors that are not considered, which could be a cause for omitted variable bias. Future research should reevaluate the chosen control variables and diminish the omitted variable bias.

Literature & Hypothesis Development

The primary objective of this research is to investigate the relationship between audit partner tenure and firm-level financial misconduct. Several previous studies have investigated this topic. In this chapter, the most relevant and noteworthy findings will be summarized to form the basis of this study. This study attempts to determine whether the length of time that an audit partner is active at a firm has a significant impact on the financial misconduct of that firm and, if so, whether this impact shifts over time. In addition to researching the effect of audit partner tenure on firm-level misconduct in financial violations, this study will also examine whether the disclosure of the engagement partner has an effect on financial misconduct.

Audit partner rotation

Audit partner rotation is the replacement of an engagement partner who performs audits for a firm. This can be either switching to an audit partner in the same audit firm or switching to an audit partner in a different firm. The frequency of audit partner rotation varies across countries, with regulations in place to enforce this, such as the mandatory five-year rotation in the United States. These regulations have been implemented to reduce the risks related to long-term connections between the audit partner and the client, such as independence issues and overly familiar relationships, while still allowing auditors to gain a thorough understanding of the clients' operations.

Mandatory audit rotation serves as an upper limit, meaning that firms can voluntarily decide to switch to another audit partner or another audit firm before the five-year period. Therefore, it is in the best interest of audit firms to uphold professional standards and deliver the best quality possible. Researchers have taken an interest in investigating the role of auditors in detecting and preventing fraudulent activities within firms. Two studies, Khaksar et al. (2022) and Mohliver (2019), have examined this topic from different perspectives.

Khaksar et al. (2022) aimed to analyze the relationship between several auditor characteristics and fraud detection in listed companies on the Tehran Stock Exchange. The findings suggested that auditor tenure, among other auditor characteristics, had a significant relationship with fraud detection. However, the study did not provide insight into whether fraud decreases or increases with increasing audit tenure. In contrast, Mohliver (2019) researched the role of external auditors in firm misconduct as measured by "stock-option backdating". This involves manipulating the date of stock options to increase their value, which can be seen as unethical or illegal. Mohliver (2019) found that external auditors play a significant role in stopping this misconduct when the rules around stock-option backdating become stricter.

These two studies provide important insights into the role of auditors in detecting and preventing fraudulent activities within firms. According to the findings, auditor tenure, as well as other auditor qualities, can have a considerable impact on fraud detection. Additionally, the

institutional environment as well as the strictness of the rules and regulations governing particular practices can have an impact on the role of external auditors in preventing misconduct (Khaksar et al., 2022; Mohliver, 2019).

The focus will now shift to research studies that have examined the effects of auditor tenure on audit quality, considering the established notion that auditors have an impact on financial misconduct. Hohenfels (2016) found that auditor tenure has a mixed effect on audit quality, with a decrease in quality observed in the first and last years of an auditor's tenure. Due to the perception that auditors are less familiar with the client in the early stages of the engagement, investors frequently place less reliance on the data provided by audit firms. During the first years, auditors primarily focus on understanding the client's operations and assessing the basics, which can damage the auditor's ability to effectively assess risk.

In the final years of an auditor's tenure, there may be a decline in professional skepticism. Auditors tend to rely more on prior-year audit procedures, which can result in overlooking certain aspects when assessing the current year's numbers. Furthermore, independence concerns may arise, which can undermine objectivity. This creates an opportunity for earnings management and facility-level misconduct to occur. The optimal level of auditor tenure was found to be 8–9 years. This is close to the maximum audit firm duration in the European Union of 10 years (Hohenfels, 2016).

Chen et al. (2016) investigated the impact of auditor tenure and audit-client distance on internal control, measured by the number of internal control incidences. They found that longer audit tenure decreased instances of internal control weakness. The study also found that the relationship between auditor-client distance and internal control weakness is weaker for firms with longer auditor tenure. The findings can be interpreted to indicate that auditor tenure plays a crucial role in the development of a deeper understanding of the client's operations, which ultimately enhances audit quality. When auditors are rotated frequently, they may not have sufficient time to develop in-depth knowledge of the firm. This supports the theory that mandatory auditor rotation may lead to the loss of client specific knowledge, resulting in increased costs and lower audit quality. In other words, the study suggests that rotating auditors regularly, can potentially cause the loss of critical knowledge about the firm.

Litt et al. (2014) examined the effect of mandatory audit partner rotation on financial reporting quality. In the first two years after the rotation, there was a decline in audit quality compared to the last two years before the rotation. This suggests that it may take some time for the new audit partner to become familiar with the firm's business and practices. The partner must establish trust with the management, so the management opens up about their firm's practices to the audit partner. Interestingly, the study found that the examined effect was even more pronounced for non-Big 4 audit partners. This may be because non-Big 4 firms have fewer resources and may struggle to maintain consistent quality across different clients. The findings of this study suggest that mandatory audit partner rotation may have unintended consequences for financial reporting quality, at least in the short term.

Similarly, Laurion et al. (2019) also researched the potential effects of mandatory audit rotation. They found no evidence that a mandatory audit partner change resulted in a higher incidence of misstatements. However, they found evidence that an audit partner change led to an increase in restatements, announcements and deferred tax valuation allowances. This suggests that while the overall incidence of misstatements may not increase, there may be more errors that are caught and corrected following a mandatory audit partner change.

The above findings highlight the complex relationship between mandatory audit partner rotation and financial reporting quality. While the initial transition period may result in decreased reporting quality, rotation may have long-term benefits in terms of identifying and addressing problems. The benefits of rotation, however, may vary depending on factors such as the auditing firm's experience and resources, the complexity of the client's business and the quality of communication and trust between the audit partner and management.

The above studies led to the following hypotheses:

H1: Audit partner rotation has a negative impact on firm-level financial misconduct in the first two years, after which the negative effect diminishes.

Audit partner engagement disclosure

Expanding upon the research on audit partner rotation, the focus now shifts to another important aspect of audit practices: audit partner engagement disclosure. Meaning that the name of the engagement partner responsible for the audit is disclosed to stakeholders. Traditionally, the name of the audit partner was only revealed to the client firm and remained incognito to other stakeholders. However, recognizing the importance of independence and objectivity, regulators have introduced mandatory disclosure of audit partner engagement.

The Public Company Accounting Oversight Board (PCAOB) introduced mandatory disclosure in 2017 in the United States (Abbott et al., 2022). The United States is not the first country to implement this rule. Other countries, like France, also have rules regarding mandatory disclosure of audit partner engagement. The purpose of this regulation is to make the audit partner more visible, so stakeholders can assess the expertise and independence of the audit partner and ultimately contribute to improved audit quality. It is crucial to understand the impact that audit partner engagement disclosure has on financial misconduct when investigating factors that could potentially damage audit quality. However, the introduction of this rule has started a debate on whether disclosing the partner's name would actually enhance audit quality. This study aims to fill this research gap by examining the relationship between mandatory disclosure of audit partner engagement and financial misconduct.

Auditing is a crucial process that assures that financial statements are trustworthy, transparent, and free of errors. The independence and objectivity of the audit team, particularly the engagement partner, are two of the most important factors influencing audit

quality. As mentioned above, the PCAOB introduced a new rule requiring audit firms to disclose the name of the engagement partner.

Disclosure of audit partner engagement involves revealing the name of the partner responsible for the audit to investors and other stakeholders. This allows stakeholders to assess the partner's expertise and independence and can increase accountability for audit quality. This creates an incentive for engagement partners to gather more evidence when conducting an audit to make sure the financial statements are correct and fully disclosed (Dao et al., 2019). Burke, Hoitash, and Hoitash (2019) found a significant increase in audit quality when firms had to disclose their audit partner. The audit delay became shorter and the audit quality and audit fees increased.

Research conducted outside of the United States of America has been done for a longer period, as the mandatory disclosure became effective earlier. Carcello & Li (2013) found a significant decline in abnormal accruals and in the propensity to meet an earnings threshold in the first years after the mandatory disclosure became effective. Additionally, the informativeness and quality of the earnings reports increased.

A potential reason why this may not have any impact in the United States but could have an impact in other countries is the high litigation risk in the US. In the US, engagement partners already have high levels of accountability when reviewing financial statements. Firms must work harder there to maintain their high-quality status, which may be why mandatory disclosure may not influence audit quality.

Cianci et al. (2017) indeed found that mandatory disclosure did not increase audit quality but instead yielded stronger writedown judgments, by negatively impacting partners' self-reported measures of professional commitment and public commitment. This is consistent with research from Cunningham et al. (2019), who did not find any significant increase or decrease in audit quality.

There is still disagreement regarding how mandatory disclosure would affect financial misconduct and audit quality. While some studies have discovered positive effects on audit quality, other studies have discovered no improvement or even negative effects. Additionally, little research has been done on the relationship between mandatory disclosure and financial misconduct, particularly in the United States, where mandatory disclosure only became effective in 2017.

Understanding the connection between mandatory disclosure of audit partner engagement and financial misconduct is essential given the importance of financial reporting integrity and the possible consequences of financial misconduct. By examining the effects of mandatory disclosure on financial misconduct in firms, this study aims to close this gap. Therefore, the hypothesis is that requiring audit partner engagement disclosure reduces financial misconduct in firms.

H2: Disclosure of audit partner engagement has a positive effect on financial misconduct in firms.

Both hypotheses contribute to the ongoing debate about auditor independence and its effects on audit quality. The first hypothesis considers the temporal aspect of mandatory audit partner rotation, specifically seeing if audit quality diminishes in the years leading to more financial misconduct within firms. This highlights the potential implications for maintaining accurate financial reporting and accentuates the importance of the independence of the engagement partner and the audit firm.

The second hypothesis aims to provide a deeper understanding of the importance of the independence of the engagement partner. As prior research examined, when disclosing the audit partner's name, it is likely that the auditor's independence, transparency and accountability increase. A reason for this is that the partner feels more responsible when assessing the financial statements of a firm.

By examining the relationship between audit partner rotation and engagement disclosure for financial misconduct, this study aims to address a gap in the current literature. Financial misconduct is one of the clearest examples of diminished audit quality, as it directly affects the reliability and trustworthiness of financial statements. Audit partner rotation and engagement disclosure are two key factors that can diminish the risks associated with long-term connections between auditors and clients, including independence issues and overly close bonds that could potentially compromise audit quality, resulting in increased financial misconduct.

Considering both hypotheses this research aims to contribute to the existing research on audit quality and promote integrity and independence in financial reporting. The findings have the potential to help regulators to form new regulations and assess the current regulations. Ultimately, the study aims to benefit a wide range of stakeholders, including regulators, auditors, and those who rely on accurate and reliable financial information for decision-making purposes.

Research Design

Data collection

Financial Misconduct

To conduct the research, data will be collected from five databases. The first database that will be used for financial misconduct is the Violation Tracker, produced by the Corporate Research Project of Good Jobs First. This database is used because it is the first wide-ranging database on corporate misconduct. It contains more than half a million cases with a total penalty amount of \$917 billion in nine different categories. This database consists of all violations that have occurred since 2000, providing a comprehensive historical perspective on misconduct. Violation Tracker removes violations where the penalty is below \$5,000, making the focus on substantial misconduct cases simple. The companies named in the violations are linked to over 3,000 parent companies, representing around 90% of the total penalty dollars. Joint ventures are treated like subsidiaries when one of the owners has a stake of more than 50 percent; those in which no owner has a majority interest are treated like independent companies (Violation Tracker, n.d.).

Data on the violations will primarily be retrieved from violations in the financial sector, as audit partners have the most effect on this. After filtering for violations in the financial sector, the variables used are *pen_year*, *PENAL*, *offense_group*, *curr_cik*. *pen_year* represents the year the penalty was announced. *PENAL* is the dependent variable used in the regression, which is the natural logarithm of 1 plus the dollar amount of penalties. The variable is transformed to account for a skewed distribution because it contains some extreme values. The remaining variables contain information on the type of offense. *PENALC* is calculated by counting the number of penalties given each year.

Audit Partner Tenure

The data for audit partner tenure, the independent variable, will be obtained from PCAOB (Public Company Accounting Oversight Board, n.d.). The PCAOB is the regulatory body overseeing audits and setting audit standards in the United States, making their database reliable and of high quality. The variables extracted from the dataset will be *EngagementPartnerID*, *Audit Report Date and Issue CIK*. *Engagement Partner ID* is a variable that contains a unique code for each audit partner. The *Report Date* reflects the year that the annual report is signed and disclosed. *Issue CIK* is a unique code used to indicate the firm. Mandatory partner disclosure became effective in 2017, which is the starting year for this dataset. The PCAOB does not require public disclosure of partner tenure and consequently does not have a dataset with partner tenure at the issuer level. To test the hypothesis, a variable, named *Duration1*, is constructed based on the data in the dataset. When a given firm has a partner with the same *Engagement ID* in the years 2019, 2020, 2021, 2022 and 2023, the variable is set to 5 in the year 2023, 4 in the year 2022, etc. The assumption is made that each partner starts in 2017, because there is no data before 2017. If a firm had the same *Engagement ID* in 2017 and 2018 and after 2018 the *Engagement ID* switched, indicating a partner change, the *Duration1* variable will be 5 in 2018 and 4 in 2017.

To overcome possible biased results, two robustness checks will be done for the independent variable, *Duration*. In the above regression, the assumption is made that every audit partner started in 2017. This is unlikely. Therefore, a second *Duration* variable will be calculated with the assumption that every partner is engaged with a firm for the maximum duration of 5 years. For example, if the Engagement Partner ID switched in 2019 for a given firm, *Duration2* will take the values 5 for 2018 and 4 for 2017. A second robustness check will eliminate both assumptions and only keep the values for observations where the *Duration3* variable correctly reflects the duration. This means that all observations where the partner started in 2017 but the maximum tenure in the available data is not 5 (the maximum duration) are deleted. For example, if the Engagement Partner ID switched in 2019 for a given firm and there are observations of that partner in 2017 and 2018 for that firm, it cannot be known for sure whether that partner started before 2017. So, this observation is deleted.

Control Variables

The data for the control variables will be obtained from Compustat, CRSP and BoardEx, which will be retrieved from the Wharton Research Data Service. Consistent with the research of Ghosh & Moon (2005) some control variables that will be included in the regression are firm characteristics; Firm age (*FAGE*), Firm size (*LSALE*), Firm profitability (*FPROF*), Firm growth (*FGROW*) Firm volatility (*FVOLA*), Firm leverage (*FLEV*), Industry type and State. Board characteristics; Independent Board members (*INDEP*), Gender ratio (*GRATIO*) and Board size (*NUMD*) and Audit firm data; Big 4 firm (*BIG4*). The control variables are included because the dependent variable, *PENAL* and *PENALC* are associated with firm, audit firm and board characteristics. They are calculated following research by Ghosh & Moon (2005). *FAGE* is calculated using the beginning and end dates of the firm as reported in CRSP. *LSALE* is the natural log of sales. *FPROF* is calculated by dividing net income by sales. *FGROW* is the sum of equity and debt divided by total assets. *FVOLA* is income before extraordinary items divided by the total number of shares outstanding. *FLEV* is the total liabilities divided by the total assets. All data on the firm's characteristics is retrieved from Compustat. Data on board characteristics is retrieved from BoardEx. The board is also associated with the dependent variable, as boards with more members and independent directors are more likely to detect fraud. *INDEP* is calculated by scaling the number of independent board members by the total number of board members. The *BIG4* variable will give the number 1 when the Audit Firm is a Big 4 company and 0 otherwise. A summary of variable definitions can be found in Appendix Table 1.

Cleaning and Merging

After all the data is collected, the cleaning process will start. First, the data for Hypothesis 1 is cleaned. The initial Violation Tracker dataset consists of 557.643 observations and the Audit Partner dataset consists of 104.987 observations. First, the duplicates are deleted. For the Audit Partner dataset, this is done by removing all observations that have the same *Issue CIK* and *EngagementPartnerID* in a year. This results in 85.165 observations. The Violation Tracker dataset does not contain any duplicates, because they have already been filtered out by the creator. Removing duplicates from this dataset will result in biased outcomes, because

it is possible that one firm has been given multiple penalties with the same dollar amount in one year. All observations with missing CIK codes are deleted and only data on the financial violations will be kept, resulting in 2.093 observations in the Violation Tracker dataset. When merging the five datasets, based on the year and CIK codes, 30.934 observations remain. All observations from the Violation Tracker dataset for which there is no match between *pen_year* and the *Audit Report Date* are deleted. The penalty dollar amount is manually set to zero for all observations from the Audit Partner dataset that are not in the Violation Tracker dataset.

As mentioned, *Duration3* will only keep the values for observations where the *Duration3* variable correctly reflects the duration. This means that all observations where the partner started in 2017 but the maximum tenure in the available data is not 5 (the maximum duration) are deleted. After eliminating those, this leaves 22.642 observations.

The data cleaning process for the Violation Tracker dataset in Hypothesis 2 is similar to that above. All audit partners are subject to the mandatory partner disclosure in 2017, so the Audit Partner dataset is not needed when testing the second hypothesis. The hypothesis will be tested for the years 2011–2022. 6 years before and 6 years after the cut-off point. After cleaning and merging, the total number of observations is 329.834 for the years 2011–2022. 6 years before and 6 years after the cut-off point. After deleting data without financial violations, 6.642 observations remain. Then the dataset is merged with the Compustat/CRSP/BoardEx dataset, leaving 1.128 observations. Many firms with violation observations are not in the Compustat/CRSP/BoardEx dataset because they are too small or lack an identifier linking them to the dataset. The sample size is smaller compared to Hypothesis 1 because it only contains values for the dependent and control variables and because observations for which the total penalty amount is zero are eliminated, in contrast to the sample for Hypothesis 1.

Table 1 - Sample selection

	AuditPartner (PCAOB)	Violation Tracker	Compustat/CRSP/BoardEx
<i>Hypothesis 1</i>			
Begin Sample	104.987	557.643	94.900
Exclude duplicates	85.165	557.643	94.860
Delete missing CIK and keep only data on financial violation	85.165	2.093	94.860
Merge databases		32.523	
End Sample		32.523	
<i>End Sample Duration3</i>		22.642	
<i>Hypothesis 2</i>			
Begin Sample		557.643	94.900
Exclude duplicates		557.643	94.860
Filter year 2011- 2022		357.901	94.769
Include only data on financial violation		6.642	94.769
Merge database		1.128	
End Sample		1.128	

Table 1: This table shows the step-by-step cleaning and merging process for the Violation database, the Auditor Tenure database and the Compustat/CRSP/BoardEx database.

In addition to the control variables, a regression will be done including year and industry fixed effects to control for omitted variables in the analysis, following the research from Heese & Pérez-Cavazos (2020). Year and industry fixed effects will capture changes in misconduct over time and per industry that are unrelated to audit tenure.

The data will be split into two regressions. First, the amount of dollar penalties received and second the number of violations.

Methodology

Hypothesis 1:

For the first hypothesis the relationship between audit partner tenure and facility-level misconduct will be measured using the following equations:

$$Violations_i = \beta_0 + \beta_1 * Duration_i + \beta_2 * Firm Size_i \dots \dots + \varepsilon_i$$

$$Penalties_i = \beta_0 + \beta_1 * Duration_i + \beta_2 * Firm Size_i \dots \dots + \varepsilon_i$$

The variable *Duration* is an independent categorical variable representing the number of successive years that an audit partner has been working with a given firm *i*. The maximum number this variable can take is 5, because of the mandatory partner rotation after 5 years. The dependent variables in this analysis will be the number of violations and the dollar penalty amount incurred by the firm. The dollar penalty amount is log transformed to account for the extreme values this variable can take. Control variables, as described previously, will also be included in the regression model. The control variables are winsorized, with extreme values replaced by the values at the 5th and 95th percentiles, meaning that below the 5th percentile and above the 95th percentile the values will be replaced with values at those percentiles. As mentioned above, a year and industry fixed effects check will also be conducted. The research will be done for the years 2017-2023, as data is only available for those years.

If the independent categorical variable is positive and statistically significant for a given year, it would mean that in that year there is an increase in the number or dollar amount of penalties incurred by the firm compared to the baseline. In this regression the baseline is the first year an audit partner was engaged with a firm. On the other hand, if it is negative and statistically significant for a given year, that would imply a decrease in the number or dollar amount of penalties incurred by the firm compared to the first year. For example, if the β_1 coefficient takes a positive and statistically significant value in *Year 2*, it would mean that in the second year an audit partner is engaged with a firm, there is an increase in financial misconduct compared to the first year. Conversely, if the β_1 coefficient takes a negative and statistically significant value in *Year 5*, it would mean that in the fifth year an audit partner is engaged with a firm, the financial misconduct decreases compared to the first year.

Hypothesis 2:

For hypothesis 2 a quasi-experimental design will be used to compare the violation rates of firms before and after the rule became effective. This will be done with a before-and-after design, which involves comparing the incidence of financial misconduct before and after the introduction of mandatory disclosure. To control for confounding factors that may affect the outcome, a year and industry fixed effects check will be conducted. Since all firms are subject to the mandatory rule change, a difference-in-difference design is not possible.

$$Violations_i = \beta_0 + \beta_1 * Before + \beta_2 * Firm Size_i \dots \dots + \varepsilon_i$$

$$Penalties_i = \beta_0 + \beta_1 * Before + \beta_2 * Firm Size_i \dots \dots + \varepsilon_i$$

If the β_1 coefficient takes a positive and statistically significant value, it would suggest that before the introduction of mandatory disclosure, the financial misconduct in firms was higher than after the rule became effective. If the coefficient takes a negative and statistically significant value, it will be the other way around.

Empirical Results

Descriptive statistics

The table below shows the descriptive statistics of the variables used in the regression models to gain a better understanding of the data. Due to the similarities in the data used for Hypothesis 1 and Hypothesis 2 the focus of the descriptive statistics will solely be on Hypothesis 1. The sample for Hypothesis 1 consists of 32.523 observations. Two variables are used for measuring the number of violations, namely *PENAL* and *PENALC*. Three variables are used for measuring auditor tenure, *Duration1*, *Duration2* and *Duration3*. The other variables are control variables.

PENAL shows the natural logarithm of 1 + the dollar amount of the violations. The relatively close values that can be observed in the statistics for *PENAL* can be attributed to the low number of penalty observations compared to the total number of observations. Table 3 shows that, on average, out of 5.416 observations, only 105 contain financial misconduct observations. The penalty amount for the other observations is set to zero, which makes the average penalty dollar amount low. This explains why the mean, median and percentiles are all close to this 0. The descriptive statistics of the independent variable are relatively similar, especially for *Duration1* and *Duration3*. This means that a regression with *Duration1* as an independent variable does not contain as much bias because it shows similar statistics when compared to the true value of *Duration3*. *Duration2* is also between the 2-3 year tenure but is a little more skewed towards the 3 year tenure. The mean *GRATIO* is 0,80, meaning that 80% of the average company's board members are male. The number of firms audited by a BIG4 firm is high, namely 71%.

Table 2 - Descriptive statistics

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
PENAL	32.523	0,35	2,26	0,00	0,00	0,00	0,00	22,39
PENALC	32.523	3,23	21,23	0,00	0,00	0,00	0,00	174,00
Duration1	32.523	2,05	1,13	1,00	1,00	2,00	3,00	5,00
Duration2	32.523	2,72	1,44	1,00	1,00	3,00	4,00	5,00
Duration3	32.523	2,13	1,19	1,00	1,00	2,00	3,00	5,00
FAGE	32.523	21,26	16,64	0,00	7,00	17,00	30,00	61,00
LSALE	32.523	6,10	2,78	0,00	4,46	6,45	8,10	10,45
FPROF	32.523	-0,28	1,08	-4,40	-0,06	0,04	0,14	0,35
FLEV	32.523	0,58	0,26	0,11	0,38	0,59	0,80	1,00
FVOLA	32.523	1,74	1,76	0,17	0,55	1,07	2,20	6,81
FGROW	32.523	1,68	1,48	0,20	0,72	1,16	2,13	5,87
GRATIO	32.523	0,80	0,13	0,14	0,71	0,80	0,88	1,00
NUMD	32.523	8,90	2,60	1,00	7,00	9,00	11,00	23,00
INDEP	32.523	84,43	22,28	0,00	66,67	100,00	100,00	100,00
BIG4	32.523	0,71	0,45	0,00	0,00	1,00	1,00	1,00

Table 2: This table shows the summary statistics of the dependent, independent and control variables for the period 2017-2023.

Table 3 - Year distribution

Year	Observations	Penalty Count	Average Penalty Amount
2017	5.085	113	0,32
2018	5.318	152	0,43
2019	5.316	145	0,39
2020	5.467	174	0,43
2021	5.920	78	0,19
2022	5.417	108	0,31
<i>Average</i>	<i>5.416</i>	<i>105</i>	<i>0,35</i>

Table 3: This table shows the distribution of the observations per year and provides insight into the average penalty amount and penalty count for those years.

Table 3 reports the distribution of the observations per year and shows how many observations involve financial misconduct. Therefore, this table provides insight into the number of observations per year, the average penalty amount and the average penalty count

for those years. The distribution of the observations that show the instances of financial misconduct is relatively even, with an outlier in the years 2020 and 2021. In 2021, the observations are lower than average; this could be because of external factors like COVID-19. For the year 2021, the average penalty amount is higher than average, but because of log transformation, the penalty amounts are all relatively close. Overall, the distribution is relatively even.

Table 4 - Pearson correlation matrix

	PENAL	PENAL C	DURA	FAGE	LSALE	FPROF	FLEV	FVOLA	FGRO W	GRATI O	NUMD	INDEP	BIG4
PENAL	1,00												
PENALC	0,95	1,00											
Duration	0,01	0,02	1,00										
FAGE	0,12	0,12	0,06	1,00									
LSALE	0,19	0,19	0,07	0,45	1,00								
FPROF	0,06	0,06	0,02	0,26	0,47	1,00							
FLEV	0,16	0,16	0,04	0,16	0,38	0,18	1,00						
FVOLA	0,07	0,07	0,03	0,17	0,36	0,07	0,14	1,00					
FGROW	-0,11	-0,11	-0,02	-0,12	-0,18	-0,18	-0,25	-0,11	1,00				
GRATIO	-0,11	-0,10	-0,17	-0,18	-0,34	-0,09	-0,12	-0,10	-0,02	1,00			
NUMD	0,23	0,23	0,07	0,35	0,57	0,23	0,38	0,18	-0,19	-0,29	1,00		
INDEP	-0,02	-0,04	0,01	-0,10	-0,14	-0,09	-0,12	-0,01	0,10	-0,02	-0,21	1,00	
BIG4	0,09	0,09	0,02	0,14	0,46	0,10	0,08	0,22	0,07	-0,31	0,32	-0,03	1,00

Table 4: This table shows the results of the Pearson Correlation Matrix, over a period of 6 years from 2017 to 2023 for the dependent, independent and control variables. The sample includes 32.523 observations. The bold values are significant at the 5 percent level ($p < 0,05$).

Table 5 shows a correlation matrix with the correlation coefficients for the dependent, independent and control variables. Only one independent variable (*Duration1*) is included, because the correlation between the separate independent variables is very high. The correlation matrix shows the strength of the linear relationships between the variables. All the coefficients show no perfect positive (+1) or perfect negative (-1) relationship, meaning that if one variable increases, the other one increases or decreases proportionally. Thus, there is no multicollinearity between the variables. There are some variables with a stronger correlation, like the number of directors (*NUMD*) and the logarithm of sales (*LSALE*). The correlation coefficient is 0,53, which can be explained by the fact that larger firms have more directors and therefore the correlation between those two is higher. Almost all correlation coefficients are significant at the 5 percent level.

Main results

Hypothesis 1:

Table 5 shows the results of the regression analysis for Hypothesis 1. It presents the regression results examining the relationship between the independent variable (*Duration1*) and the two outcome variables: penalty dollar amount (column 1-3) and penalty count (column 4-6). The second and fifth column shows the results with a year fixed effect analysis and the third and sixth column shows the results with an industry fixed effects analysis.

In all Models, the intercept term represents the estimated value of the outcome variable when all other independent variables are zero. For Model (1) the intercept is estimated to be -1,33***, with a standard error of 0,16, indicating a statistically significant result at the 1 percent level. The same statistically significant result is found in Models (2) and (3), indicating their importance in explaining financial misconduct. However, the other dummy coefficients for the Year variable don't show a significant effect. Only one duration dummy variable shows a significant result at the 1 percent level, namely *Year 5* in Model (1). In terms of economic magnitude, this indicates that in the 5th sequential year an audit partner is engaged at a firm, the dollar penalty amount decreases by approximately 23% compared to the first year. The coefficient of the dummy variable *Year 2* in Model (1) shows a significant effect on the 10% level, indicating that in the second year an audit partner is engaged at a firm, the dollar penalty amount increases by 6%. But these effects diminish when accounting for year and industry fixed effects, indicating that the outcome variables are no longer statistically significant. By including these fixed effects, time-invariant factors that may influence the relationship between auditor tenure and financial misconduct are accounted for. The significant effect seen in Model (1) is no longer present in Model (2) and Model (3), which emphasizes the importance of accounting for fixed effects and obtaining a more accurate understanding of the relationship.

In contrast, for the penalty count, almost all models show statistically significant results in the second and fifth year. Model (6) even shows a significant effect in the fourth year. When accounting for industry fixed effects the number of penalties conducted by a firm increase by 0,86 in the second year and 0,78 in the fourth year compared to the first year. In the fifth year the number of penalties decreases by 1,67. This suggest a lower number of

penalties in the first year and last year of an audit partner engagement, compared to the second and fourth year. These results imply that the initial hypothesis that the financial conduct is higher in the first two years of an engagement may not hold. But it does suggest that audit partner tenure does have an association with financial misconduct in firms when looking at the number of penalties conducted.

Furthermore, almost all control variables show a statistically significant result with either the penalty dollar amount or the penalty count, only BIG4 and FVOLA don't show a significant effect in all Models. This means that almost all control variables have a significant effect on financial misconduct in a firm, as measured by the total penalty amount and penalty count. Including these control variables is important to isolate the effect of auditor tenure on financial misconduct. It enhances the validity and robustness of the analysis.

Moving on to the R-squared (R^2) and adjusted R-squared (Adjusted R^2) values, these statistics provide information about the proportion of variance explained by the regression models. In Models (1) and (2), the R^2 values are 7,0% and 7,2% respectively, for the penalty dollar amount. In Model (3), the R^2 value increases to 34,3%, meaning that a larger proportion of the variance is explained in Model (3). This value indicates that the independent variables included in the model explain a modest portion of the variance in the outcome variable. The adjusted R^2 values are similar to the R^2 values.

A potential reason why the initial hypothesis is rejected could be due to the limited explanatory power of the regression models. Looking at the R^2 values, there is still a significant portion of the variance that is unexplained. This suggests that there could be other factors that influence the outcome variable.

Table 5 – Financial misconduct and auditor tenure – Hypothesis 1

Variables	Penalty dollar amount			Penalty count		
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1,33*** (0,16)	-1,19*** (0,17)	-1,02*** (0,32)	-12,86*** (1,50)	-10,94*** (1,60)	-10,39*** (2,98)
Duration1_yr2	0,06* (0,04)	0,06 (0,04)	0,04 (0,03)	1,12*** (0,34)	0,91** (0,39)	0,86** (0,28)
Duration1_yr3	-0,05 (0,04)	-0,06 (0,05)	0,00 (0,04)	-0,27 (0,40)	-0,58 (0,45)	0,26 (0,45)
Duration1_yr4	-0,08 (0,05)	-0,09 (0,06)	-0,07 (0,05)	0,79 (0,51)	0,29 (0,55)	0,78* (0,55)
Duration1_yr5	-0,23*** (0,08)	-0,12 (0,09)	-0,09 (0,07)	-3,01*** (0,78)	-1,03 (0,82)	-1,67** (0,82)
BIG4	-0,01 (0,04)	-0,02 (0,04)	0,14*** (0,04)	-0,10*** (0,37)	-0,24 (0,37)	1,12*** (0,37)
FAGE	0,00*** (0,00)	0,00*** (0,00)	0,01*** (0,00)	0,02*** (0,01)	0,02** (0,01)	0,08*** (0,01)
LSALE	0,09*** (0,01)	0,09*** (0,01)	0,20*** (0,01)	0,78*** (0,09)	0,81*** (0,09)	1,72*** (0,09)
FPROF	-0,12*** (0,02)	-0,12*** (0,02)	-0,14*** (0,02)	-1,09*** (0,16)	-1,07*** (0,16)	-1,25*** (0,16)
FLEV	0,56*** (0,06)	0,54*** (0,06)	-0,22*** (0,07)	5,22*** (0,61)	4,83*** (0,61)	-1,90*** (0,61)
FVOLA	0,00 (0,01)	0,00 (0,01)	-0,02** (0,01)	0,04 (0,09)	0,03 (0,09)	-0,25*** (0,09)
FGROW	-0,10*** (0,01)	-0,10*** (0,01)	-0,03** (0,01)	-0,96*** (0,10)	-1,00*** (0,10)	-0,26*** (0,10)
GRATIO	-0,58*** (0,13)	-0,70*** (0,13)	-0,45*** (0,12)	-4,65*** (1,19)	-6,63*** (1,24)	-3,32*** (1,24)
NUMD	0,13*** (0,01)	0,13*** (0,01)	-0,02*** (0,01)	1,28*** (0,07)	1,27*** (0,07)	0,01 (0,07)
INDEP	0,00*** (0,00)	0,00*** (0,00)	0,00*** (0,00)	0,02*** (0,01)	0,02*** (0,01)	0,02*** (0,01)
Year FE	No	Yes	No	No	Yes	No
Industry FE	No	No	Yes	No	No	Yes
R ²	7,0%	7,2%	34,3%	8,2%	7,7%	35,0%
Adjusted R ²	7,0%	7,1%	32,7%	7,1%	7,6%	33,9%
Number of observations	32.523	32.523	32.523	32.523	32.523	32.523

***p < 0.01; **p < 0.05; *p < 0.1.

Table 5 shows the results of the linear regression analysis examining the impact of duration on the dollar amount of violations (column 1-3) and the number of violations (column 4-6) with the independent variable

Duration1. *Duration1* assumes that all audit partners started in 2017 at a firm. In Model (2) and Model (5) year fixed effects are included. In Model (3) and Model (6) industry fixed effects are included. The intercept represents the estimated value of the outcome variable when all other independent variables are zero. The dependent variable, penalty count, was also log-transformed to see if this had any effect on the results. The results stayed the same and had the same significance. Therefore, the normal variable is used in the regressions and not the log transformed variable.

Robustness checks:

Table 2 and Table 3 in the Appendix show the Robustness checks. In Table 2, Models (1) and (3), the same variables are significant for the dollar penalty amount as in the above table. The intercept is a little bit lower, now showing a value of -1,38. The biggest difference between the regression analyses is the Year 5 variable in Model (2), which is now significant. But this effect diminishes when accounting for industry fixed effects. The coefficients in Year 5 still show a decrease in the number of penalties compared to the first year. The association between the number of penalties and financial conduct is more pronounced in the second regression, only showing a 0,27 decrease in the number of penalties conducted by a firm in the fifth year of an auditor engagement.

In contrast to Table 2, the Year 4 variable in Table 3 Model (3) is now significantly negative, showing a decrease of 13% in the dollar penalty amount in the fourth year compared to the first year. This effect disappears when looking at the number of penalties, then only the fifth year is significant when accounting for industry fixed effects. This significant coefficient is similar as above, showing only a 0,16-point differences.

Regarding the R-squared (R^2) and adjusted R-squared (Adjusted R^2) values, Table 5 reports R^2 values ranging from 7,0% to 35,0% and Adjusted R^2 values ranging from 7,0% to 33,9%. Table 2 (Appendix) reports R^2 values ranging from 7,0% to 34,9% and Adjusted R^2 values ranging from 7,0% to 33,9%. Table 3 (Appendix) reports R^2 values ranging from 7,3% to 37,9% and Adjusted R^2 values ranging from 7,2% to 36,4%. Both sets of values suggest that the regression models explain a modest proportion of the variance in financial misconduct, with Table 3 (Appendix) showing a slightly higher value.

Table 5 and Table 2 (Appendix) show a decrease in financial misconduct in the fifth year compared to the first year, as indicated by lower penalty amounts and counts. Table 3 provides more true values of the effect of audit partner tenure (*Duration3*) but has less observations than Table 1.

Hypothesis 2:

Table 6 shows the results of the regression analysis for Hypothesis 2. It presents the regression results examining the relationship between the independent variable (*Before 2017*) and the two outcome variables: penalty dollar amount and penalty count. The second column shows the results of the year fixed effect analysis and the third column includes the results of the regression analysis with an industry fixed effect.

In Model (1), the intercept term represents the estimated value of the outcome variable when all other independent variables are zero. For the penalty dollar amount, the intercept is

estimated to be 9,65**, with a standard error of 1,75, indicating a statistically significant result at the 5 percent level. In Model (3), the intercept is estimated to be 6,22*, with a standard error of 3,60, indicating a statistically significant result at the 10 percent level.

The independent variable (*Before 2017*) represents the period before mandatory engagement partner disclosure. In Models (1), (2) and (3) this variable is not statistically significant, so no conclusion about the effect of mandatory engagement partner disclosure on financial misconduct can be drawn. However, when only looking at the number of penalties in columns (4) and (5) a positively statistically significant effect can be seen. Meaning that before mandatory disclosure, there was a significant increase in the number of penalties conducted by a firm compared to after the implementation of the rule. With an increase of even 24,25 percent when accounting for industry fixed effects. This supports the hypothesis that mandatory engagement partner disclosure decreases financial misconduct in firms.

Not all control variables show a statistically significant result with either the penalty dollar amount or the penalty count. In Model (3), *BIG4* and *LSALE* are significant at either the one or five percent level and positively associated with the dollar amount penalty. Suggesting that firm age and firm size are associated with higher amounts of penalties. *FPROF* is negatively associated with the dollar amount penalty, suggesting that profitability is associated with lower dollar amount penalties. In Model (5), this effect spins, showing a positive association between *FPROF* and the number of penalties and a negative association between *LSALE* and the number of penalties.

Moving on to the R-squared (R^2) and adjusted R-squared (Adjusted R^2) values, these statistics provide information about the proportion of variance explained by the regression models. In Models (1), (2) and (3), the R^2 values range from 6,4% to 18,3% respectively, for the penalty dollar amount and in Models (5) and (6) 30,8% and 39,5% for the penalty count. The adjusted R^2 values, which account for the number of predictors in the model, range from 7,1% to 7,5% in Models (1), (2) and (3). In Models (5) and (6) the values are 30,0% and 31,2%. Indicating that the independent variables included in the model explain a small portion of the variance in the outcome variables. When including industry fixed effects in the model, the variance that is explained increases.

Table 6 - Effect of audit partner engagement disclosure on penalty dollar amount and penalty count – Hypothesis 2

Variables	Penalty dollar amount			Penalty count	
	(1)	(2)	(3)	(4)	(5)
Intercept	9,65** (1,75)	9,93** (1,80)	6,22* (3,60)	77,22*** (10,09)	67,40*** (20,65)
Before 2017	-0,17 (0,23)	-0,63 (0,62)	-0,20 (0,25)	24,08*** (1,32)	24,25*** (1,44)
BIG4	1,03* (0,61)	1,05* (0,61)	1,57** (0,75)	11,79*** (3,50)	13,78*** (4,31)
FAGE	0,01 (0,01)	0,01 (0,01)	0,01 (0,01)	-0,07 (0,05)	-0,04 (0,06)
LSALE	0,46*** (0,09)	0,47*** (0,10)	0,48*** (0,11)	-1,25** (0,54)	-1,90*** (0,64)
FPROF	-0,82 (1,26)	-1,50 (1,28)	-4,00** (1,66)	17,47** (7,25)	30,14*** (9,54)
FLEV	0,15 (1,06)	0,39 (1,06)	-1,55 (1,51)	5,51 (6,09)	12,01 (8,63)
FVOLA	-0,08 (0,06)	-0,08 (0,06)	0,01 (0,07)	0,54 (0,34)	-0,03 (0,42)
FGROW	-0,09 (0,24)	-0,09 (0,24)	0,07 (0,40)	1,78 (1,37)	1,69 (2,27)
GRATIO	-0,64 (1,16)	-0,51 (1,22)	0,16 (1,31)	-2,35 (6,69)	-5,01 (7,50)
NUMD	-0,03 (0,05)	-0,02 (0,05)	-0,04 (0,05)	0,32 (0,27)	0,30 (0,29)
INDEP	-0,00 (0,00)	-0,00 (0,00)	-0,00 (0,01)	0,02 (0,03)	0,05 (0,03)
Year FE	No	Yes	No	No	No
Industry FE	No	No	Yes	No	Yes
R ²	6,4%	9,4%	18,3%	30,8%	39,5%
Adjusted R ²	7,4%	7,5%	7,1%	30,0%	31,2%
Number of observations	1.128	1.128	1.128	1.128	1.128

***p < 0.01; **p < 0.05; *p < 0.1.

Table 6 shows the results of the linear regression analysis examining the impact of duration on the dollar amount of violations (column 1-3) and the number of violations (column 4-6) on the independent variable *rule_before* and *rule_after*. The mandatory disclosure became effective in 2017, so this is the cut-off point. In Model (2) year fixed effects are included. In Models (3) and (5) industry fixed effects are included. The intercept represents the estimated value of the outcome variable when all other independent variables are zero. The dependent variable, penalty count, was also log-transformed to see if this had any effect on the results. The results stayed the same and had the same significance. Therefore, the normal variable is used in the regressions and not the log transformed variable.

Conclusion

This study examines the relationship between audit partner tenure and financial misconduct. Because data on audit partner tenure is not available, three different variables have been created to measure the effect. The dollar amount and total number of penalties imposed by a firm serve as indicators of financial misconduct.

Hypothesis 1, which states that audit partner rotation has a negative impact on financial misconduct in the first two years, after which this effect diminishes, has been rejected. According to the analysis, there were fewer financial violations in the first year of an audit partner engagement than in the second and fourth years. In the fifth year, the number of violations was lower than in the first year. A possible explanation for this is that the audit engagement partner has greater knowledge of the firm. An explanation for the low number of financial violations in the first year can be the extensive research a partner has to do in their first years as an engagement partner to get to know the firm, spending more time looking at the firm's business. No conclusions can be drawn on the dollar penalty amount, as this effect is not statistically significant.

Hypothesis 2, which states that disclosure of partner engagement has a positive effect on financial misconduct, is not rejected. The dollar penalty amount does not show explicit results; however, when focusing on the number of violations, the coefficients become statistically significant. Seeing that before the engagement disclosure became mandatory, the number of violations was higher compared to after the new rule, which may reflect an increase in audit quality, an explanation for this is the higher accountability when the partner's name is disclosed.

Financial misconduct is a sign of improved audit quality in both results. The temporal aspect of auditor rotation as well as the importance of independence are both examined. Providing that audit partner tenure does influence financial misconduct and that the effect is more significant when the audit partner name is disclosed, the findings have the potential to help regulators form new regulations and assess the current ones. Ultimately, the study aims to benefit a wide range of stakeholders, including regulators, auditors, and those who rely on accurate and reliable financial information for decision-making purposes.

While this research provides valuable insights into the current literature, there are still some limitations. The sample size of the Violation Tracker dataset is quite small compared to the Audit Tenure dataset. Obtaining more data on violations could result in more significant results and possible other conclusions. This study only implies the United States of America, which may not be representative of other continents. For further research, the suggestion is to look at other countries that may be more generalizable. Furthermore, the timeframe is relatively small. Now only 6 years are considered, and with a maximum duration of 5, not a lot of audit partner shifts can be observed. Future research could look at data where audit partner information is available for a longer period. There may also be external factors that

are not considered, which could be a cause for omitted variable bias. Future research should reevaluate the chosen control variables and diminish omitted variable bias.

Reference List

- AS 1005: Independence.* (n.d.). PCAOB. <https://pcaobus.org/oversight/standards/auditing-standards/details/AS1005>
- Abbott, L. J., Boland, C., Buslepp, W., & McCarthy, S. (2022). US Audit partner identification and auditor reporting. *Journal of Accounting and Public Policy*, 41(1).
- Bostrom. (2022, July 26). Audit Firm Rotation vs. Audit Partner Rotation. <https://www.bostrom.com/blog/audit-firm-rotation-vs-audit-partner-rotation/#:~:text=Currently%2C%20public%20companies%20are%20required,U.S.%20to%20rotate%20audit%20firms.>
- 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.
- Carcello, J. V., & Li, C. (2013). Costs and benefits of requiring an engagement partner signature: Recent experience in the United Kingdom. *The Accounting Review*, 88(5), 1511-1546.
- Chen, C. Y., Lin, C. J., & Lin, Y. C. (2008). Audit partner tenure, audit firm tenure, and discretionary accruals: Does long auditor tenure impair earnings quality?. *Contemporary accounting research*, 25(2), 415-445.
- Chen, Y., Gul, F. A., Truong, C., & Veeraraghavan, M. (2016). Auditor client specific knowledge and internal control weakness: Some evidence on the role of auditor tenure and geographic distance. *Journal of Contemporary Accounting & Economics*, 12(2), 121-140.
- Cianci, A. M., Houston, R. W., Montague, N. R., & Vogel, R. (2017). Audit partner identification: Unintended consequences on audit judgment. *Auditing: A Journal of Practice & Theory*, 36(4), 135-149.

- Cunningham, L. M., Li, C., Stein, S. E., & Wright, N. S. (2019). What's in a name? Initial evidence of US audit partner identification using difference-in-differences analyses. *The Accounting Review*, 94(5), 139-163.
- Davis, L. R., Soo, B. S., & Trompeter, G. M. (2007). Auditor tenure and the ability to meet or beat earnings forecasts. *Contemporary Accounting Research*, *Forthcoming*.
- Dao, M., Xu, H., & Liu, L. (2019). Impact of the disclosure of audit engagement partners on audit quality: Evidence from the USA. *International Journal of Auditing*, 23(1), 112-124.
- Garcia-Blandon, J., Argiles, J. M., & Ravenda, D. (2020). On the relationship between audit tenure and fees paid to the audit firm and audit quality. *Accounting in Europe*, 17(1), 78-103.
- Ghosh, A., & Moon, D. (2005). Auditor tenure and perceptions of audit quality. *The accounting review*, 80(2), 585-612.
- Heese, J., & Pérez-Cavazos, G. (2020). When the boss comes to town: The effects of headquarters' visits on facility-level misconduct. *The Accounting Review*, 95(6), 235-261.
- Heese, J., & Pérez-Cavazos, G. (2021). The effect of retaliation costs on employee whistleblowing. *Journal of Accounting and Economics*, 71(2-3), 101385.
- Hohenfels, D. (2016). Auditor tenure and perceived earnings quality. *International Journal of Auditing*, 20(3), 224-238.
- Khaksar, J., Salehi, M., & Lari DashtBayaz, M. (2022). The relationship between auditor characteristics and fraud detection. *Journal of Facilities Management*, 20(1), 79-101.
- Laurion, H., Lawrence, A., & Ryans, J. P. (2017). US audit partner rotations. *The Accounting Review*, 92(3), 209-237.
- Litt, B., Sharma, D. S., Simpson, T., & Tanyi, P. N. (2014). Audit partner rotation and financial reporting quality. *Auditing: A Journal of Practice & Theory*, 33(3), 59-86.

Mandatory rotation of auditors: Streamlining European countries' Audit rules. (2022).

Accountancy Europe. Retrieved February 3, 2023, from

https://www.accountancyeurope.eu/wp-content/uploads/Audit-Rotation-2022_Accountancy_EU.pdf

Mohliver, A. (2019). How misconduct spreads: Auditors' role in the diffusion of stock-option backdating. *Administrative Science Quarterly*, 64(2), 310-336.

Muslim, M., Ahmad, H., Rahim, S., & ARPelu, M. F. (2020). Client Pressures, Audit Tenure to Audit Quality: Moderation of Auditor Independence. *Journal Of Auditing, Finance, And Forensic Accounting*, 8(2), 67-75.

Public Company Accounting Oversight Board. (n.d.). <https://pcaobus.org/>

Shoaib, A. (2017, September 27). KPMG rocked by South African corruption scandal.

Accountancy Age. <https://www.accountancyage.com/2017/09/27/kpmg-rocked-south-african-corruption-scandal/>

Violation Tracker. (n.d.). © Good Jobs First. <https://violationtracker.goodjobsfirst.org/>

Appendix

Table 1 - Variable definition

<i>Variables</i>	<i>Description</i>
Dependent variable - Violations	
Dollar amount of penalty (PENAL)	The logarithm of 1 plus the total dollar amount of the penalty given to the firm by different governmental agencies
Count of penalties (PENALC)	Number of penalties associated with the firm. Calculated by counting the number of penalties given each year.
Independent variable – Auditor tenure	
Duration1	The duration is calculated under the assumption that every partner starts in 2017 for a given firm. For example, if an EngagementPartnerID is the same for the years 2019, 2020 and 2021 but changes in the year 2022 for a firm, then the duration is 1 in 2019, 2 in 2020, 3 in 2021 and 1 in 2022.
Duration2	The duration is calculated under the assumption that every partner stays for the maximum duration of 5 years. If there is a partner change in 2020 (seen by a change in the EngagementPartnerID), then the duration is 3 in 2017, 4 in 2018 and 5 in 2019.
Duration3	Only the true values of the above durations are kept in Duration3. This variable is calculated without assumptions. It deletes all observations where an assumption is made.
Control variables	
Firm age (FAGE)	Firm age, measured by the beginning and end date of the firm reported in CRSP (CRSP: LINKENDDT – LINKDT).
Firm size (LSALE)	Firm size, measured by the natural log of sales (Compustat: log of sale).
Firm profitability (FPROF)	Firm profitability, measured by net income divided by net sales (Compustat: ni/sale).
Firm leverage (FLEV)	Firm leverage, measured by total liabilities divided by total assets (Compustat: lt/at).
Firm volatility (FVOLA)	Firm volatility, measured by the standard deviation of income before extraordinary items scaled by number of outstanding shares. The standard deviation calculates the variability of this ratio in each firm. (Compustat: ib/csho).
Firm growth (FGROW)	Firm growth, measured by the market value of equity + debt in current liabilities + long term debt divided by total assets. The market value of equity is calculated by multiplying the number of shares outstanding with the closing price (Compustat: ((csho * prcc_c + dlc + dltd)/at).
Gender ratio (GRATIO)	Gender ratio is measured by dividing the number of individuals of a specific gender by the total number of individuals on a company's board of directors (BoardEx: GenderRatio).
Board size (NUMD)	Board size is measured by the total numbers of directors in the board of a company (BoardEX: NumberDirectors).

Board independence (INDEP)	First, an independence dummy is created that shows the number 1 if the word “Independence” is in the variable description. Second, the independence dummy is divided by the total number of directors in the board of a company (BoardEx: BoardRole).
Audit firm Big 4 (BIG4)	The audit firm dummy shows the number 1 if the audit firm belongs to the Big 4 (Price Waterhouse Coopers, Deloitte, Ernst & Young and KPMG) and zero otherwise (Compustat: au #4, #5, #6, #7).

Table 2 - Financial misconduct and auditor tenure *Duration2*

Variables	Penalty dollar amount			Penalty count		
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1,38*** (0,16)	-1,15*** (0,17)	-1,03*** (0,32)	-12,96*** (1,48)	-10,89*** (1,62)	-10,15*** (2,98)
Duration2_yr2	0,03 (0,04)	0,04 (0,04)	-0,00 (0,04)	10,62 (0,40)	0,68* (0,40)	0,25 (0,34)
Duration2_yr3	-0,02 (0,04)	-0,03 (0,04)	0,01 (0,04)	-0,19 (0,42)	-0,12 (0,42)	0,08 (0,36)
Duration2_yr4	-0,02 (0,04)	-0,03 (0,05)	-0,04 (0,04)	0,46 (0,43)	0,57 (0,43)	0,25* (0,36)
Duration2_yr5	-0,08* (0,04)	-0,10** (0,05)	-0,04 (0,04)	-0,7 (0,43)	-0,84* (0,43)	-0,27*** (0,36)
BIG4	-0,01 (0,04)	-0,02 (0,04)	0,14*** (0,04)	-0,07 (0,37)	-0,24 (0,37)	1,12*** (0,34)
FAGE	0,00*** (0,00)	0,00*** (0,00)	0,01*** (0,00)	0,02*** (0,01)	0,02** (0,01)	0,08*** (0,01)
LSALE	0,09*** (0,01)	0,09*** (0,01)	0,20*** (0,01)	0,78*** (0,09)	0,81*** (0,09)	1,72*** (0,09)
FPROF	-0,12*** (0,02)	-0,12*** (0,02)	-0,14*** (0,02)	-1,09*** (0,16)	-1,08*** (0,16)	-1,26*** (0,14)
FLEV	0,57*** (0,06)	0,54*** (0,06)	-0,22*** (0,07)	5,23*** (0,61)	4,83*** (0,61)	-1,90*** (0,62)
FVOLA	0,00 (0,01)	0,00 (0,01)	-0,02** (0,01)	0,04 (0,09)	0,03 (0,09)	-0,25*** (0,08)
FGROW	-0,10*** (0,01)	-0,10*** (0,01)	-0,03** (0,01)	-0,97*** (0,10)	-1,00*** (0,10)	-0,27*** (0,10)
GRATIO	-0,51*** (0,12)	-0,70*** (0,13)	-0,41*** (0,11)	-4,24*** (1,18)	-6,63*** (1,24)	-3,25*** (1,06)
NUMD	0,13*** (0,01)	0,13*** (0,01)	-0,02*** (0,01)	1,27*** (0,07)	1,27*** (0,07)	0,01 (0,07)
INDEP	0,00*** (0,00)	0,00*** (0,00)	0,00*** (0,00)	0,02*** (0,01)	0,02*** (0,01)	0,02*** (0,01)
Year FE	No	Yes	No	No	Yes	No
Industry FE	No	No	Yes	No	No	Yes
R ²	7,0%	7,2%	31,4%	7,1%	7,7%	34,9%
Adjusted R ²	7,0%	7,1%	30,3%	7,0%	7,6%	33,9%
Number of observations	32.523	32.523	32.523	32.523	32.523	32.523

***p < 0.01; **p < 0.05; *p < 0.1.

Table 2 shows the results of the linear regression analysis examining the impact of duration on the dollar amount of violations (column 1-3) and the number of violations (column 4-6) with the independent variable

Duration2. *Duration2* assumes that all audit partner tenure is 5 years. In Model (2) and Model (5) year fixed effects are included. In Model (3) and Model (6) industry fixed effects are included. The intercept represents the estimated value of the outcome variable when all other independent variables are zero.

Table 3 - Financial misconduct and auditor tenure *Duration3*

Variables	Penalty dollar amount			Penalty count		
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1,48*** (0,19)	-1,10*** (0,23)	-1,01*** (0,39)	-14,93*** (1,84)	-10,66*** (2,16)	-10,60*** (3,57)
Duration3_yr2	0,05 (0,04)	0,07 (0,05)	0,02 (0,04)	0,92** (0,43)	0,98** (0,43)	0,52 (0,35)
Duration3_yr3	-0,04 (0,05)	-0,02 (0,05)	-0,00 (0,05)	-0,40 (0,50)	-0,23 (0,52)	-0,02 (0,42)
Duration3_yr4	-0,12* (0,06)	-0,07 (0,07)	-0,13** (0,06)	0,38 (0,61)	1,11* (0,63)	0,05 (0,51)
Duration3_yr5	-0,22*** (0,09)	-0,09 (0,09)	-0,09 (0,08)	-3,10*** (0,83)	-0,74 (0,86)	-1,83*** (0,69)
BIG4	0,01 (0,05)	-0,00 (0,05)	0,22*** (0,05)	-0,14 (0,46)	-0,11 (0,46)	1,77*** (0,42)
FAGE	0,01*** (0,00)	0,01*** (0,00)	0,01*** (0,00)	0,05*** (0,01)	0,05*** (0,01)	0,11*** (0,01)
LSALE	0,08*** (0,01)	0,08*** (0,01)	0,21*** (0,01)	0,72*** (0,11)	0,76*** (0,11)	1,76*** (0,11)
FPROF	-0,11*** (0,02)	-0,11*** (0,02)	-0,15** (0,02)	-1,09*** (0,19)	-1,06*** (0,19)	-1,33*** (0,17)
FLEV	0,58*** (0,08)	0,54*** (0,08)	-0,35*** (0,08)	5,27*** (0,77)	4,66*** (0,77)	-2,90*** (0,77)
FVOLA	-0,02 (0,01)	-0,02 (0,01)	-0,02** (0,01)	-0,19* (0,11)	-0,21** (0,11)	-0,32*** (0,10)
FGROW	-0,11*** (0,01)	-0,11*** (0,01)	-0,02 (0,01)	-0,99*** (0,12)	-1,06*** (0,12)	-0,17 (0,12)
GRATIO	-0,49*** (0,15)	-0,68*** (0,16)	-0,44*** (0,14)	-3,09** (1,49)	-6,26*** (1,53)	-2,57* (1,32)
NUMD	0,13*** (0,01)	0,13*** (0,01)	-0,05*** (0,01)	1,35*** (0,09)	1,34*** (0,08)	-0,18** (0,08)
INDEP	0,00*** (0,00)	0,00*** (0,00)	0,00*** (0,00)	0,02*** (0,01)	0,02*** (0,01)	0,03*** (0,01)
Year FE	No	Yes	No	No	Yes	No
Industry FE	No	No	Yes	No	No	Yes
R ²	7,3%	7,5%	32,6%	7,4%	8,2%	37,9%
Adjusted R ²	7,2%	7,4%	31,0%	7,3%	8,1%	36,4%
Number of observations	22.642	22.642	22.642	22.642	22.642	22.642

***p < 0.01; **p < 0.05; *p < 0.1.

Table 3 shows the results of the linear regression analysis examining the impact of duration on the dollar amount of violations (column 1-3) and the number of violations (column 4-6) with the independent variable

Duration3. *Duration3* only included observations where it is certain what the duration is, so without assumptions. In Model (2) and Model (5) year fixed effects are included. In Model (3) and Model (6) industry fixed effects are included. The intercept represents the estimated value of the outcome variable when all other independent variables are zero.