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The Effect of Non-Audit Fees on Interest Payments Classification Shifting: Does Internal Governance and Firm Financial Well-being Matter?

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Abstract

Purpose– This study examines the effect of non-audit fees (NAF) provisions on interest payments classification shifting. In addition, we investigate to what extent the NAF economic bonding and interest payments classification shifting is contingent on internal governance and firm financial well-being.

Design/methodology/approach – This study employed Probit regression using a sample of UK non-financial firms indexed in FT UK (500) over the period from 2009 to 2017.

Findings – We find evidence that the economic bonding of NAF between external auditors and their clients is more likely to encourage managers in UK firms to manipulate operating cash flows through interest payment classification shifting. In addition, and interestingly, our results evince that classification-shifting may be the less costly and the soft choice of managers in firms with strong governance and charging higher NAF. Furthermore, we show that financially distressed firms associated with their auditors in purchasing non-audit services are more prone to attempting to manipulate and engage in interest payments classification-shifting. Our result did not provide a significant effect of external auditor tenure on the interest payments classification shifting.

Originality/value – This study motivated by the UK's Financial Reporting Council regulators' pressure on the Big 4 audit firms to move more audit time into main auditing activities, reduce cross-selling to audit clients, and separate their audit practices by 2024. Overall, we provide new evidence that directs a close spotlight on the threats of NAF potentially useful to regulators, shareholders, and investors.

Keywords classification shifting; non-audit fees; corporate governance quality; auditor's independence.

Paper type- Research paper

1. Introduction

This study investigates whether the economic bonding of non-audit fees (NAS) impairs auditor independence to mitigate operating cash flows manipulation using classification shifting of interest payments. This extends to the controversial debate between researchers, regulators, and practitioners over the threats of auditor independence and the negative effects on audit quality. Tepalagul and Lin, (2015) identify four main threats to auditor independence: (a) the importance of the auditor's client, (b) non-audit fees, (c) the tenure of the external auditor, (d) and client affiliation with the audit firm. This study focuses on the potential threats of NAS purchase fees on auditor independence. Our study is motivated by the UK's Financial Reporting Council (FRC) regulators' pressure on Big 4 audit firms to move more audit firm time into main auditing activities while reducing cross-selling to audit clients (Thomson Reuters, 2020) and separate their audit practices by 2024 (Financial Reporting Council, 2020; Friedman and Mahieux, 2021).

The economic bonding of the NAS provision heightens the self-interest threat, increasing the risk that auditors aligns their interests with those of the client to retain incumbency with the client (Hohenfels and Quick, 2020; Quick et al., 2013). The threat of NAS economic bonding is that it could impair auditors' objectivity in the financial reporting process (Anandarajan et al., 2012; Mitra and Hossain, 2007); hamper skepticism (Beattie and Fearnley, 2002), and motivate the incumbent auditor to overlook the breach in the client's accounting system, act opportunistically in the client's favor to secure their benefits (Svanström, 2013), and report the material misstatement (DeAngelo, 1981; Friedman and Mahieux, 2021).

Prior literature has focused on investigating the impact of non-audit fees on detecting earnings management activities (Chung and Kallapur, 2003; Dee et al., 2006; Ferguson et al., 2004; Frankel et al., 2002; Habib and Islam, 2007; Huang et al., 2007; Larcker and Richardson, 2004; Lim and Tan, 2008; Reynolds and Francis, 2000; Srinidhi and Gul, 2007). However, less evidence exist on the the impact of the NAS fees on detecting the management classification shifting within the statement of cash flows. Therefore, this study aims to examine whether the effect of NAF economic bonding, which may impair auditor independence, incentivizes managers to engage in

interest payment classification shifting. Additionally, we explore whether this effect is contingent on the firm's internal governance and financial well-being, using a sample of UK firms indexed in the FT UK (500) from 2009 to 2017.

This study finds that firms paying high NAF are more to engage in shifting the classification of interest payments. Furthermore, and intriguingly, our findings suggest that this relationship is more pronounced in firms with strong corporate governance.. Finally, consistent with previous research, distressed firms paying high NAS are more likely to engage in shifting the classification of interest payments demonstrating that these firms perceive classification shifting as a less costly and softly choice to manipulate.

This study contributes to the classification of shifting literature in several ways. First, our study extends the current literature on examining determinants and consequences of classification shifting, most studies examine earnings-based classification shifting (Abernathy et al., 2014; Alfonso et al., 2015; Anagnostopoulou et al., 2021; Eilifsen and Knivsflå, 2021a; Haw et al., 2011; Malikov et al., 2021; Zalata and Roberts, 2017), and little studies examine cash-based classification shifting (Charitou et al., 2018; Gordon et al., 2017; Lee, 2012; Nagar and Raithatha, 2016; Nagar and Sen, 2016). We contribute to the literature where the present study provides unique evidence on the association between the NAF and manipulation practices through interest payment classification shifting.

Second, prior studies on NAF focus only on earnings management (Chung and Kallapur, 2003; Dee et al., 2006; Ferguson et al., 2004; Frankel et al., 2002; Habib and Islam, 2007; Huang et al., 2007; Larcker and Richardson, 2004; Lim and Tan, 2008; Reynolds and Francis, 2000; Srinidhi and Gul, 2007). Our study provides the first evidence of the association between the provisions of NAF and interest payment classification shifting.

Our finding may be helpful for regulators generally and especially the UK's Financial Reporting Council (FRC) from two perspectives: From an accounting perspective, our study evidence sheds light for the FRC on the flexibility in the IFRS principles-based standards that encourage managers to misclassify even with strong governance shifting becoming the less costly and soft choice. From an auditing perspective, our study provides evidence to support the FRC's pressure on audit firms to spend more time on audit activities and that the FRC should exert more effort in restricting the provision of NAF.

The remainder of the paper is organized as follows: Section 2 presents the institutional and theoretical background of the UK corporate governance code, classification shifting, and the UK NAS market. Section 3 covers a review of related literature and the research hypotheses development. Section 4 discusses the research design. Section 5 presents the empirical results. Section 6 concludes the paper.

2. Institutional and Theoretical Background

2.1 Institutional background (The Code)

The UK corporate governance code (the Code) compliance was first developed in 1991 as the Cadbury Code, as a voluntary code of corporate governance best practices for aspects (e.g., board structure, committee composition, and independence) that focused on investor confidence in equity markets and financial reporting quality. The UK Code, in general, is based on a new form of regulation known as "comply or explain." In contrast to the United States, which applies the "Legalization approach" under the Sarbanes-Oxley Act of 2002, where UK firms have to disclose in their annual reports whether or not they comply with the code provisions and explain why they don't (Arcot et al. 2010; Roberts et al. 2020; Luo et al. 2021).

Post to the 2002 Enron and WorldCom collapses in the U.S. and the results of the 2003 UK Higgs review, the government shaped the FRC to promote confidence in the Code. The FRC led the latest UK corporate governance code (the Code) reform in 2018. The new “shorter and sharper” code enhances the transparency, accountability, and long-term sustainable success of firms. The Code includes new clarification on boardroom independence, board diversity, executive pay disclosure, and elaboration on enhancing the effectiveness of non-executive directors (Arcot et al., 2010; FRC, 2018; Roberts et al. 2020; Luo et al., 2021; Shrives and Brennan, 2005).

In summary, the UK corporate governance code was adopted on three pillars: (1) The Code’s flexibility to comply or explain why they do not; (2) shareholders' pay due regard to the firms which lowers the firm's litigation risk; and (3) the governance power of the independent board and the effectiveness of non-executive directors.

In less regulated environments, the UK Combined Code has embraced the 'comply or explain' principle in corporate governance (Zaman et al., 2011). The Combined Code and the UK Listing Authority provide the legal framework in the United Kingdom for the firm's corporate governance process. They emphasize the legal responsibilities of directors in terms of stewardship and monitoring. The UK legal framework stresses the necessity of non-executive directors when

working with external auditors and establishing the firm's internal control mechanisms, including an audit committee, to guide companies on governance issues. The Higgs Review and the Smith Report have reinforced the principles underlying the UK's Corporate Governance Code. Non-executive directors can also help monitor and improve the quality of audit services (Chahine and Filatotchev, 2011).

Lee (2008) argues that independent boards increase the quality of financial reporting by playing a vital role in supervising management and reducing opportunities for fraud. Boards are a critical corporate governance mechanism widely regarded as an effective tool in curbing earnings management (El Diri et al., 2020). Drawing on the results of Ching et al. (2006), it is evident that good corporate governance depends on the quality of the board of directors and the composition of the board. The reputation and expertise of board directors enhance this quality, and factors such as board size, board independence, and chairman duality also play important roles in governance quality.

2.2 Role of interest payment classification shifting on the financial well-being of firms

Cash flow risk, signifying uncertainty in the amount and timing of future cash flows, can significantly impact a firm's financial well-being. Consequently, this can influence the credit rating—a key metric indicating creditworthiness and repayment likelihood. A lower credit rating may result in increased borrowing costs, impacting interest rates charged by lenders. Elevated borrowing costs can further impede the firm's cash flow, restricting access to capital markets and vital external financing sources. While firms can manage cash flows without affecting earnings by deferring suppliers' payments and hastening customer collections, they can deliberately exploit GAAP flexibility. This includes the classification shifting of operating cash flow items like interest paid, interest received, and dividends received by the reclassification of cash items within the statement of cash flows (Zhang, 2020). Gordon et al. (2017) reported variations in European firms classifying interest paid, interest received, and dividends received in operating cash flows under IFRS compared to what would be reported under U.S. GAAP. Baik et al. (2016) stated that 13.5% of sampled Korean firms misclassify interest payments. Arguably, inflating operating cash flows (OCF) through classification shifting initiates a disclosure issue that is challenging to verify, impacting investors and creditors (Lee, 2012; Baik et al., 2016; Gordon et al., 2017). For example, Lee (2012) presented evidence that U.S. firms misclassify operating cash flows to meet analyst forecasts, influence investor perceptions, and enhance credit ratings. Surprisingly, there is a

scarcity of research on classification shifting within the statement of cash flows, despite the importance of OCF as a core performance independent of earnings (DeFond and Hung, 2003; Lee, 2012), and the incremental usefulness of cash flows in securities valuation (DeFond and Hung, 2003).

To manipulate cash flow risk strategically, managers may shift interest payment classifications to mitigate operating cash flow risk, potentially compromising the information content and reliability of their operating cash flows. Recent evidence by Usman et al. (2023) suggests that non-financial UK and German-listed firms engage in classification shifting to artificially inflate core earnings, potentially undermining investors' confidence. Additionally, Baik et al. (2016) reported that approximately 13.5% of Korean firms adopting IFRS shifted interest payments from OCF to financing cash flows, resulting in a 16.9% overstatement of OCF. Such OCF classification shifting could alter market participants' perceptions of firm performance (Charitou et al., 2018). Another study by Charitou et al. (2018) indicates that one-third of the 229 firms listed in the July 2006 FTSE UK 350 index, switching to IFRS adoption, chose not to classify interest payments within OCF. This discretionary management under UK GAAP could potentially impair disclosure quality and lower expectations for future performance. Furthermore, Gordon et al. (2017) found that firms with higher financial distress, more equity issuance, higher debt leverage, and lower profitability are more likely to make classification choices for interest paid, interest received, or dividend received to increase OCF.

Classification shifting involves opportunistic classification and improper inclusion to manipulate financial statements. It is characterized by vertically misclassifying line items in financial statements to manipulate core earnings or OCF, with the bottom line of the statement remaining unchanged (Dao et al., 2022; Fan et al., 2010; Gordon et al., 2017; McVay, 2006; Usman et al., 2023; Zalata and Roberts, 2017; Zalata and Roberts, 2016). This results in no further adverse consequences on the firm's business success—hereafter referred to as a 'soft manipulation choice' (Anagnostopoulou et al., 2021). Moreover, it is considered a less costly opportunistic choice (Fan et al., 2010) and is subject to less caution by either internal or external monitors (Zalata and Abdelfattah, 2021), hereafter referred to as a 'less costly manipulation choice.'

On the flip side, classification shifting poses significant drawbacks. Firstly, it undermines the credibility of financial statements, introducing doubt and skepticism to the reliability of the reported financial information. Secondly, it has the potential to mislead users of financial

statements, particularly investors and financial analysts, providing them with distorted information about the financial performance of the entity and compromising the accuracy of valuation assessments (Abernathy et al., 2014; Dao et al., 2022). Therefore, interest payment classification shifting carries significant implications for the financial well-being of companies and the valuation of their securities.

2.3 The UK NAS market

Doubts about the reliability of financial information shed light on the role of the external auditor as an external dependent/competent monitoring mechanism in providing independent assurance of the credibility of accounting information and deterring managers' opportunistic behavior through the abuse of accounting discretion (Dao et al., 2022; M. DeFond and Zhang, 2014; Tsipouridou and Spathis, 2012). Krishnan (2003) found that auditors play a vital role in limiting agency costs by deterring accruals based on opportunistic behavior. DeAngelo (1981) argued that the external auditor's ability to detect misstatements depends on auditor's competence and independence. However, auditor's independence could be impaired due to the fees of the NAS (DeFond et al., 2002).

NAS involve all services provided by incumbent auditors to their clients other than auditing, including compliance-related services such as tax compliance, advice, and consultancies such as accounting, appraisal and valuation, actuarial services, and assurance-related services such as internal auditing (Arruñada, 1999; Beattie and Fearnley, 2002; Schneider et al., 2006). The provision of NAS to audit clients could involve auditors more deeply in the business and operational aspects of their clients and gain more client-specific knowledge from NAS that could be used in the audit to the same client which can be referred to as the NAF knowledge spillovers. The International Federation of Accountants (IFAC) describes the potential knowledge spillovers of NAS as, 'the provision of such non-assurance services will often result in the assurance team obtaining information regarding the assurance client's business and operations that is helpful in relation to the assurance engagement' (IFAC's, 2005, para. 290.158, Code of Ethics).

As a result, the knowledge spillover effects make the audit task more effective because auditors exploit knowledge to better understand the client's procedures and controls and assesses the client's business risk. For example, auditors offering NAS to their clients, such as the development of internal controls, are well-positioned to conduct appropriate tests of internal controls throughout the audit process (Svanström, 2013). The presence of knowledge spillovers

from NAS to audits could allow audit firms to perform the audit task at a lower cost (Antle et al., 2006; Hohenfels and Quick, 2020; Svanström, 2013). Therefore, the NAS knowledge spillovers could enhance audit effectiveness and reduce audit fees (Zarefar, 2023). Consequently, the economies of scope effect of knowledge spillovers made by auditors are partly shared with the audit client via lower audit fees (Klumpes et al., 2016; Krishnan and Yu, 2011).

However, the provisions of NAS would impair auditor independence and be questionable due to two main interrelated causes. First, NAF increase the economic bonding between external auditors and clients, which refers to the importance, dependence, and influence of the client on auditors (DeAngelo, 1981; Dee et al., 2006). This raised the U.S. Securities and Exchange Commission (SEC) serious concern about the independence of auditors' problem associated with the growth of NAF provisions (relative value of NAF to total fees), and the substantial economic dependence of external auditors on clients (Ashbaugh et al., 2003; Deberg et al., 1991; Hossain et al., 2023). Where, the economic bonding associated with the lucrative consulting opportunities using the same clients -specific information or knowledge spillover which declines NAF cost and might lead to an increase in quasi-rent from NAF (Hohenfels and Quick, 2020).

Therefore, the economic bonding of the NAF provision increases self-interest threat or greater risk where auditors aligns their interests with those of the client in order to sustain a longstanding relationship (Hohenfels and Quick, 2020; Quick et al., 2013). The threat of NAF economic bonding is that it could impair the auditors' objectivity in the financial reporting process (Anandarajan et al., 2012; Mitra and Hossain, 2007); hamper skepticism (Beattie and Fearnley, 2002), and motivate the incumbent auditor to overlook the breach in the client's accounting system, opportunistically the audit firm act to handle for the interest of the benefits the client(Svanström, 2013), and report the material misstatement (DeAngelo, 1981; Friedman and Mahieux, 2021).

The second NAS independence threat is social bonding, also referred to as the familiarity threat. This arises from repeated interactions and the building of a business relationship between the incumbent auditor and their clients. It is based on both the trust between clients and the auditing firm, as well as a personal interest in the client, often resulting in a preferable outcome for the client (Hohenfels and Quick, 2020; Kowaleski et al., 2018; Kuenzel et al., 2008; Svanström, 2013). The detrimental effect of NAS-induced social bonding increases with the closeness of the auditor-manager relationship (Svanström, 2013), which may convert the incumbent auditor's role from an

independent external reviewer to that of an internal advisor (Ferramosca and Allegrini, 2017). It could restrict the auditor's skepticism, impair the auditor's objectivity, and obstruct the auditor's independence (Hohenfels and Quick, 2020).

The recent accounting scandals, such as Enron's excessive payments to Arthur Andersen for NAF, underscored the growing regulatory concern, prompting the SEC to address the issue through Section 201 of the Sarbanes-Oxley Act (SOX) in 2002. This legislative intervention prohibited external auditors from providing numerous non-audit fees to their audit clients, although such services continue to constitute a substantial portion of auditors' total fees (Carcello et al., 2020). Shifting the focus to the UK, recent accounting scandals such as Tesco Accounting Scandal (2014) The supermarket giant overstated its profits by £326 million while paying £10.2 million in audit fees to PwC, which included £5.5 million for its audit and audit-related services.

In contrast to the US, the UK has not imposed a strict ban on NAF, but rather a cap of 70% where the UK Financial Reporting Council (FRC) to reduce conflicts of interest possibility revised in 2016 the ethical standards change auditor independence rules by placing a new cap on non-audit fees: "….new 70% cap on fees for non-audit fees compared to the average statutory audit fee over the previous three years will apply from the fourth financial period commencing on or after 17 June 2019 – so for a year-end calendar company, this will first apply throughout the year ending 31 December 2020…"(Deloitte, 2016, p. 2). In 2019, The UK parliament issued the BEIS House of Commons Committee of Public Accounts report on the "Future of Audit" showing the distribution of the Big 4 firms' fees which breaks up as audit and NAF from audit and non-audit clients. Figure (1) shows the distribution of 2017 Big 4 income represented on average only 20% of income from audit services, 10% of income from NAS to audit clients and 70% from NAS to non-audit clients (House of Commons Committee of Public Accounts, 2019).

Figure 1

According to a study by Thomson Reuters, the fees paid to the Big 4 audit firms by FTSE 100 companies for NAF dropped in 2019 by 12% compared to last year (Thomson Reuters, 2020). The UK FRC encouraged the Big 4 audit firms to separate their audit practices by 2024. Audit firms will need to strengthen their audit activities and ensure that audit partner spends most of their time on auditing. In addition, audit firms will have to disclose their profit and loss statements, separate from those of the firm, and ensure that there is no material, structural cross-subsidies from other business parts (Financial Reporting Council, 2020; Friedman and Mahieux, 2021).

Overall, the regulators limit the NAS market by imposing restrictions on auditing firms' activities to deliver high audit quality to their audit clients. Despite the restrictions imposed on NAS, auditing firms' wide variety of services that auditors can offer to their audit clients, some of which still represent a material portion of auditors' total fees (Dickins and Skantz, 2010). The provision of incumbent auditors' NAS to their clients might compromise the auditor's independence, This, in turn, casts doubt on the accounting outcomes' trustworthiness (Blaylock et al., 2014).

3. Literature review and Hypotheses development

3.1 Non-audit fees(NAF)

Early research examines the relationship between audit quality and auditor's fees. Kinney and Libby (2002, p 109:110) suggested that "unexpected fees may also better capture the profitability of the services provided… more insidious effects on economic bond may result from unexpected non-audit and audit fees that may more accurately be likened to attempted bribes". For instance, Choi et al. (2010) investigated the effect of abnormal audit fees on audit quality and empirically reveal that external auditors' incentives to detect biased financial statements differ systematically based on whether their client's audit fee is more or less than the normal level, and that abnormal audit fees are negatively associated with audit quality. In a similar context, Krauß et al. (2015) asserted that the fee premium resulting from abnormal audit fees is a significant indicator of compromised auditor independence due to economic auditor–client bonding. Moreover, they claim that abnormal audit fees enhance client bargaining power, which dampens auditor independence. However, this notion changed following SOX, which limited the opportunity for auditors to sell NAF to clients (Asthana et al. 2012).

The provision of NAF under the contract theory, as discussed by Arrow (1985) and Hoppe and Schmitz (2018), suggests that contractual relationships between auditors and their clients might increase the problem of 'moral hazard.' In this context, if auditors receive substantial fees for non-audit services, their incentive to report inaccuracies or issues in financial statements could be diminished. This reluctance arises from a potential risk to their profitable relationship with the client. Consequently, NAF could impair an auditor's independence in verifying the accuracy of accounting reports and constrain managerial opportunistic behavior (Quick et al., 2013). This unobservable agent behavior falls under the principal-agent problem's moral hazard category, characterized as 'hidden action.' According to Arrow (1985), this is defined as: 'Effort is a disutility

to the agent, but it has value to the principal in the sense that it increases the likelihood of a favorable outcome.' In scenarios where auditors are motivated by opportunistic behavior, they may interpret accounting matters in a way that aligns with management's viewpoint to secure future business for their firm. Such 'hidden action' behavior remains invisible to investors, other stakeholders, and regulating authorities (Quick et al., 2013).

In the context of the contract theory, Frankel et al. (2002) investigated the validity of the SEC's concerns following the Enron collapse and the conviction of Arthur Andersen. In response to these events, the SEC adopted measures to restrict the Non-Audit Services (NAS) provided by auditors. These actions stem from worries that auditor independence might be compromised, and the auditor's objectivity reduced, due to their economic dependency on the client arising from NAS fees. This study, employing a sample of US firms, documented a positive association between earnings management (used as a proxy for auditor independence) and the likelihood of meeting or beating analyst forecasts. This was measured as the magnitude of firm-level absolute discretionary accruals and correlated with the purchasing of NAS. Frankel et al. (2002) concluded that an increase in auditors' NAF heightens their financial dependence on the client, which could threaten their independence.

Similar to Frankel et al. (2002), Using a sample of UK firms Larcker and Richardson (2004) provided additional evidence that this association is stronger among firms that engage in unusual accrual choices audited using non-Big 5 auditors constrained by the reputation effects. However, they argue that a positive association occurs only for a small sample of firms (8.5% of the total sample) characterized by weaker governance. Furthermore, according to Ferguson et al., (2004), the economic connection between auditors and their clients arising from the joint provision of NAS may enhance auditors' willingness to adopt opportunistic accounting practices to retain their clients, potentially compromising the quality of financial reporting.

Another evidence from Continental Europe's countries using a sample of the German firms listed on the Frankfurt stock exchange, Hohenfels and Quick (2020), found that NAS fees are paid to the auditor, especially for other assurance and other consultancy services (but not by tax services), impair the independence of the auditor resulting from the negative effect of economic and social bonding, as well as increase the absolute value of discretionary accruals, resulting in lower audit quality. Moreover, the findings of Hohenfels and Quick (2020) reveal that the new

restrictions on the provision of NAS imposed by the EU are too lax and fail to prevent an impairment of audit quality.

Eilifsen and Knivsflå (2021) found that when high-quality audit firms possibly prevent accrual earnings management, firms substitute with classification shifting. As well as firms that are audited by non-specialized Big 4 audit firms and provide NAS to their clients, these firms potentially misclassify core operational expenses as special items to manipulate core earnings, especially around equity issuing. This means that the economic bonding of NAS fees potentially impairs the quality of the audit to detect intentional management classification shifting to inflate core earnings. In contrast, Blaylock et al., (2014) found no evidence to support the relationship between growth rates of non-audit fees or the non-audit fee the length of time of relationship with the client and earnings management using discretionary accruals. This finding is consistent with (Ashbaugh et al., 2003; Chung and Kallapur, 2003). On the other hand, Che et al. (2013) found that incumbent auditors, when engaged in a relationship with their clients in the form of NAS, increase audit quality. This improvement is measured in terms of adjusted discretionary current accruals and the earnings response, aimed at avoiding potential litigation exposure and safeguarding their reputation. This is particularly evident when they are subject to high institutional monitoring, such as from institutional ownership.

We argue that the economic dependence of auditors on their clients threatens the auditor's dependence, leads auditors to behave opportunistically, and constrains how auditors react to classification shifting of interest payments to manipulate OCF driven by a desire to maintain their clients to preserve the clients' income from audit and NAS. Drawing on such an argument, our first study hypothesis is as follows:

H1. Non-audit fees are positively associated with interest payment classification shifting.

3.2 Internal corporate governance quality

Usman et al. (2023) show that the agency problem, relating to control and ownership separation, or the agency problem raises the demand for the external auditor role. The issue of information asymmetry appears when one side has more information regarding financial transactions than the other side. According to the agency theory (Fama and Jensen, 1983; Jensen and Meckling, 1976), corporate governance is mainly perceived as a monitoring mechanisms adopted to alleviate agency costs, fight against opportunistic behavior, and constrain managers' self-serving actions that could impair the integrity of financial information and impose costs on

shareholders, investors, and other market participants (García-Meca and Sánchez-Ballesta, 2009; Rashid, 2016; Tang and Chang, 2015). Extant research suggested that effective governance constrains the managers' ability to manipulate, mitigates the abuse of accounting discretion, and primarily enhances the quality of financial reporting (Duh et al., 2009; García-Meca and Sánchez-Ballesta, 2009; Tang and Chang, 2015). Indeed, Peasnell et al. (2005) found that effective corporate governance in terms of board independence is associated with lower levels of accrual earnings management. Furthermore, governance mechanisms play a vital role in restricting opportunities to manipulate earnings and affect which method of earnings management is employed (Tang and Chang, 2015).

El Diri et al. (2020) found that in concentrated markets, corporate governance is more effective in mitigating accrual earnings management, which becomes more costly as the probability of being detected increases under a strong governance system, driving managers to substitute with real earnings management, which becomes less costly as firms' competitive power increases. Abernathy et al. (2014) found that managers are more likely to resort to classification shifting instead of both real management and accruals management when high levels of institutional ownership, low accounting system flexibility, and the provision of a cash flow forecast.

In this context, we argue that internal corporate governance plays an active monitoring role that affects the association between non-audit fees and interest payment classification shifting. We posit that managers in firms with strong corporate governance increase the detection risk of accrual management, and the negative impact of real earnings management on the firm’s long-term value becomes crucial. However, economic bonding of the NAS fees between auditors and their clients is more likely to incentivize managers to employ classification shifting, which it is the least costly substitute for real and accrual management . In comparison, managers in less internally governed firms and auditors’ economic dependence have more opportunities to choose between real management and accrual management.

The provision of NAS by the incumbent auditor may create or exacerbate the agency problem and information asymmetry. On one hand, the auditor may have an incentive to compromise their independence and quality of the audit in order to secure more lucrative non-audit contracts from the client. On the other hand, the auditor may have access to more information about the client, creating an imbalance of power and trust. As a result, some regulators have

imposed restrictions on the types and amount of NAS that auditors can provide to their audit clients (Quick et al., 2013). In this context, our second hypothesis explores how internal governance mechanisms (such as the board of directors and audit committee) have incentives and the ability to undertake monitoring and oversight that can reduce the independence threat posed by non-audit services provision and preserve audit quality that affects the use of interest payments classification shifting.

Our second hypothesis is:

H2. The relationship between non-audit fees and interest payment classification shifting is more pronounced for firms with strong governance quality.

3.3 Firm Financial Well-being

Extant research suggests that cash flow classification shifting and the classification shifting of interest payments are more pronounced in firms with a higher probability of financial distress, to inflate reported OCF, reduce the cost of capital, and improve financial performance (Lee, 2012; Baik et al., 2016). Consistent with this evidence, we conjecture that the associations between classification shifting and NAF are more pronounced in financially distressed firms. Drawing on this argument, we investigate whether the associations between classification shifting, and NAF vary according to the firm's financial well-being.

H3. The relationship between non-audit fees and interest payment classification shifting is more pronounced for financially distressed firms.

4. Research design

We employ a quantitative research approach, utilizing financial statements, market data, and corporate governance data to measure our variables. In this section, we discuss the data, sample selection process, the measurement of variables, and the empirical model.

4.1 Data and sample selection

We use a sample of UK non-financial firms indexed in FT UK (500). We test our hypotheses over the period from 2009 to 2017. The rationale for this period is threefold. First, the current study is constrained by time limitation due to key significant accounting changes in the Code of Practice for Local Authority Accounting in the United Kingdom, which became effective in 2018/2019 to effectively adopt IFRS 9 and IFRS 15. Second, this study employs the FT UK (500) issued on

March 31, 2015, by the Financial Times that was available during the data collection span. Third, there is a significant missing in audit fees data before 2007.

Data for this study are collected from various sources. Annual financial and market data were extracted from DataStream, while corporate governance data were retrieved from the Broadex database. Additionally, we manually gathered the financial statements of the sample to identify the classification of interest payments. We traced interest classification within cash flow statements over the study period and determined if firms changed interest classification and manually identified firms that voluntarily practiced interest payment classification shifting within the cash flow statement. This study excludes dissolved firms or in liquidation, firms-year observations with missing financial statements data, corporate governance data, or audit fees data. Finally, we run the research model using a final sample of 2103 firm-year observations over the years 2009 to 2017. Table 1 shows the sample.

Table 1

4.2 Dependent variable: interest payments classification shifting

Firms can increase their OCF without affecting earnings by delaying payments to suppliers and collecting payments from customers faster. They can also misuse the flexibility under GAAP and misclassify cash flow items, such as interest paid, interest received, and dividends received, by moving them within the statement of cash flows (Zhang, 2020). Following Baik et al. (2016) and Charitou et al. (2018), we use interest payments classification shifting as a proxy for how firms manipulate their cash flow statements. We investigate whether firms changed the classification of interest paid from operating activities to financing activities or vice versa during the study period. We use an indicator variable to measure this change. It takes a value of 1 if firms changed the interest payments classification during the study period and 0 otherwise. This indicator helps us detect cases where firms modified how they classified interest payments in their cash flow statements.

4.3 Independent variable: non-audit fees (NAF)

Frankel et al. (2002) refers that audit firm disclosures of fees for audit services and non-audit fees can help investors infer information about the credibility and quality of financial reporting as well as earnings management. Under the UK Companies (Disclosure of Auditor Remuneration and Liability Limitation Agreements) Regulations 2008 No. 489: "…company must

disclose both the audit fee and all other fees receivable by the auditors for services supplied by them and their associates to the company…(The Companies (Disclosure of Auditor Remuneration and Liability Limitation Agreements) Regulations 2008)."

Extending to Prior studies (Blay and Geiger, 2013; Carcello et al., 2020; DeFond et al., 2002; Ferguson et al., 2004; Frankel et al., 2002; Geiger and Rama, 2003; Hohenfels and Quick, 2020; Koh et al., 2013; Lee, 2008; Li, 2009; Lim and Tan, 2008; Mitra and Hossain, 2007; Quick et al., 2013; Shan et al., 2021), We employ two alternative measures for the purchase of NAS, which represent the economic bonding from NAF between auditors and management (Lee, 2008) as follows: (1) the proportion of non-audit service fees to total service fees paid to incumbent auditors; and (2) the natural log of non-audit fees.

4.4 Independent variable: internal corporate governance quality

To test whether high-quality internal corporate governance is more likely to enhance auditor independence and strengthen the internal control process, non-audit service fees are expected to be lower, and managers in these firms will be less prone to engage in interest payment classification shifting. Following Zaman et al. (2011), we used a composite measure. This measure reflects various characteristics of the board of directors and audit committee in one composite measure (GOV).

This composite measure offers a more comprehensive presentation of internal governance quality. The main advantage of using the composite measure is that individual measures have an unclear theoretical relationship with governance quality (Zalata and Roberts, 2016). In addition, the single or individual measures by themselves may not be an effective proxy for governance quality and thus need further investigation (Sami et al., 2011).

The GOV is structured in alignment with the guidelines outlined in the UK Combined Code. The Code endorses that a minimum of fifty percent of the board of directors, excluding the board chairman, should be independent. It also emphasizes the importance of a clear separation of responsibilities between the CEO and the board chairman. Moreover, the Code recommends that audit committees consist of at least three independent non-executive director members, with one of them possessing relevant and recent financial experience (Reddy, 2019). Extant research (Boone et al., 2007; Ching et al., 2006; Martín and Herrero (2018); John and Senbet, 1998) suggested that the large board of directors' size can cause some control issues such as poor communication between board members and co-ordination in addition to the free ride problem. For example, Ching

et al. (2006) provided empirical evidence that there is a direct relationship between the board size and discretionary current accruals. Furthermore, Persons (2006) provided insights into how the effectiveness of the board of directors' compromises with the large board size and smaller number of board meetings. Similarly, Girau et al. (2022) found that a smaller board size enhances the board's effectiveness in monitoring and mitigating fraud. In line with these studies, Ghosh et al. (2010) found that the board of directors' size and the board audit committee size are strongly related to the accruals earnings management.

Setia-Atmaja et al. (2011) results exhibited that a higher independent proportion of board directors is more likely to enhance the effectiveness of the monitoring role of the board in reducing earnings management and curbing agency problems. However, the extant research suggests that the agency problem rises as the board's independent director's ownership increases (i.e., Klein, 2002; Xie et al. 2003; Zalata and Roberts, 2016). Moreover, Zaman et al. (2011) provided evidence for a sample of UK firms, showing that corporate governance quality, measured as a composite measure of audit committee strength, including committee independence, financial expertise, diligence, and committee size, has a positive association with NAF. Furthermore, Usman et al. (2022) provided evidence for a sample of German-listed firms, indicating that the audit fee ratio is negatively associated with classification shifting. Extending these results, the findings of Usman et al. (2023) indicate that UK and German firms with audit committees possessing financial expertise deter managers from shifting the classification of core expenses and revenue. Additionally, Usman et al. (2023) report that the frequency of audit committee meetings limits UK managers from engaging in classification shifting.

Therefore, the GOV, a composite measure for internal corporate governance includes overall governance quality in terms of the board of directors and audit committee overall quality and incorporates several attributes specifically focused on the board of directors' quality. These include board size, CEO duality, financial expertise of directors, board independence, independent directors' ownership, and board of directors' meetings. Additionally, the GOV encompasses characteristics focused on the board audit committee quality following Zaman et al. (2011), such as audit committee size, audit committee independence, and audit committee expertise. The GOV _INDEX is constructed as follows:

$$GOV = \sum (BOARDSIZE, DUAL, FINEXPERT, BOARDIND, INDOWN, BOARDMEETINGS, COMSIZE, COMIND, COMFINEXPT) \div 9$$

The composite measure (**GOV**) is the sum of:

BOARDSIZE = equal to 1 when the firm a has a board size less than the sample mean, zero otherwise;

DUAL = equal to 1 when the firm separation of the CEO and the board chairman position, zero otherwise;

FINEXPERT = equal to 1 when the firm has a financial expert relative to the board committee more than the sample mean, zero otherwise;

BOARDIND = equal to 1 when the proportion of non-executive directors to board size is more than or equal to 50%, zero otherwise;

INDOWN = equal to 1 when the proportion of independent directors' ownership is less than the sample mean, zero otherwise;

BOARDMEETINGS = equal to 1 when the board of directors' number of meetings is more than the sample mean, zero otherwise;

COMSIZE = equal to 1 when the size of audit committee relative to board size is more than the sample mean, zero otherwise;

COMIND = equal to 1 when the firm proportion of non-executive directors to board committee size more than or equal 50%, zero otherwise;

COMFINEXPT= equal to 1 when the audit committee encompass at least 3 members and at least one of them has financial experience, zero otherwise;

A higher sum reflects more effective corporate governance (Brown and Caylor, 2006; Cassell et al., 2012; O'Sullivan et al., 2008; Ward et al., 2009; Zalata and Roberts, 2016).

In addition, we break down the GOV into two sub-composite measures: BOARD, which comprises the six main attributes related to the board of directors (BOARDSIZE, DUAL, FINEXPERT, BOARDIND, INDOWN, BOARDMEETINGS), and the AUDCOM, which includes three attributes related the audit committee (COMSIZE, COMIND, COMFINEXPT).

4.5 Independent variable: firm financial health

Firm financial health (FIN_HEALTH) is a broad concept that reflects the overall health and sustainability of a business. We measured the firm's financial health using the reverse of the Altman Z-score.

Altman's Z score = ((6.56 (Working capitalt-1/Total assetst-1))+(3.26 (Retained earningst-1/Total assetst-1)) +(6.72 (Profit before interest and taxt-1/Total assetst-1))+(1.05 (Common equityt-1/Total liabilitiest-1))) x -1

Therefore, the reversed Altman's Z score reflects the overall financial health and the risk of default. In this context, a higher Z score indicates a distressed firms, while a lower value indicates financially healthy firms.

4.6 Control variables

To control firm characteristics, this study uses several variables as dependent and independent variables. The size hypothesis suggests that large firms tend to use accounting information to lower their political costs(Watts and Zimmerman, 1990). We employ two measures of firm size: the natural logarithm of total assets (SIZE) and market-to-book value (MARKET_GROWTH). Another control variable is OCF, which reflects the firm's operating performance. Additionally, this study uses the standard deviation of earnings (SD(EARNINGS)) and the standard deviation of cash flows from operations (SD(OCF)) to capture the uncertainty and sustainability of earnings and cash flows, respectively.

4.7 Empirical model

To empirically examine the relationship between the classification shifting of interest payments and NAF, the dependent variable in this study is dichotomous, and according to Noreen's (1988, p 119) argument, "Probit and logit have been used to test hypotheses in a number of recent classificatory studies in accounting." These recent studies utilize a categorical (usually dichotomous) dependent variable assumed to be a linear (or log-linear) function of several explanatory variables. While ordinary least squares (OLS) regression has been used in similar studies in the past, the assumptions underlying OLS regression significance tests are violated when dealing with a dichotomous dependent variable. In contrast, probit and logit are theoretically attractive alternatives. Probit has been used more frequently than logit in recent accounting

classificatory studies. We employed the probit regression model below to test the research hypotheses:

$$\textbf{INTEREST\_SHIFTING} = \beta_0 + \beta_1 NAF + \beta_2 GOV + Controls + \varepsilon \quad (1)$$

Where INTEREST_SHIFTING is a dummy variable coded as 1 if firms changed their interest paid classification during the study period and 0 otherwise where under UK GAAP, IFRS allows for management discretion in the presentation of interest paid in any section of the cash flow statement (Baik et al., 2016; Charitou et al., 2018); and NAF is Non-audit fees measured as 1) the relative level of non-audit service fees to total service fees (**NAF_RATE**) and 2) the natural log of non-audit fees (**LOG_NAF**). We expect the coefficient on NAF to be positive (negative) if a firm chooses to shift interest payment classification within the cash flows statement. GOV is the composite internal corporate governance mechanism.

Upon and above, our research hypothesis, we built the following two Probit models to test H1 as follows:

$$\textbf{INTEREST\_SHIFTING} = \beta_0 + \beta_1 \textbf{NAF} + \beta_2 \textbf{BOARD} + \beta_3 \textbf{AUDCOM} + \beta_4 \textbf{SIZE} + \beta_5 \textbf{FIN\_HEALTH} + \beta_6 \textbf{MARKET\_GROWTH} + \beta_7 \textbf{OCF} + \beta_8 \textbf{SD(EARNINGS)} + \beta_9 \textbf{SD(OCF)} + \varepsilon \quad (2)$$

$$\textbf{INTEREST\_SHIFTING} = \beta_0 + \beta_1 \textbf{NAF} + \beta_2 \textbf{GOV} + \beta_3 \textbf{SIZE} + \beta_4 \textbf{FIN\_HEALTH} + \beta_5 \textbf{MARKET\_GROWTH} + \beta_6 \textbf{OCF} + \beta_7 \textbf{SD(EARNINGS)} + \beta_8 \textbf{SD(OCF)} + \varepsilon \quad (3)$$

To test H2, we extended the research model by interacting between the strength of internal corporate governance quality (GOV) and NAF as follows:

$$\textbf{INTEREST\_SHIFTING} = \beta_0 + \beta_1 \textbf{NAF} + \beta_2 \textbf{GOV} + \beta_3 \textbf{SIZE} + \beta_4 \textbf{FIN\_HEALTH} + \beta_5 \textbf{MARKET\_GROWTH} + \beta_6 \textbf{OCF} + \beta_7 \textbf{SD(EARNINGS)} + \beta_8 \textbf{SD(OCF)} + \beta_9 \textbf{NAF* GOV} + \varepsilon \quad (4)$$

Where β_9 refers to the interaction effect between the NAF and the strength of internal governance settings.

To test H3, we extended the research model by interacting between the firm financial well-being (FIN_HEALTH) and NAF as follows:

$$\textbf{INTEREST\_SHIFTING} = \beta_0 + \beta_1 \textbf{NAF} + \beta_2 \textbf{GOV} + \beta_3 \textbf{SIZE} + \beta_4 \textbf{FIN\_HEALTH} + \beta_5 \textbf{MARKET\_GROWTH} + \beta_6 \textbf{OCF} + \beta_7 \textbf{SD(EARNINGS)} + \beta_8 \textbf{SD(OCF)} + \beta_9 \textbf{NAF* FIN\_HEALTH} + \varepsilon \quad (5)$$

Where β_9 refers to the interaction effect between the NAF and the financial health of the firm.

Appendix 1 contains definitions of the variables used in the study.

5. Empirical results and discussion

5.1 Descriptive statistics and correlation matrix

The descriptive statistics of the study variables are presented in Panel A of Table 2. The table reveals that, on average, 18% of the study sample misclassified interest payments (INTEREST_SHIFTING) within the cash flow statement during the study period. Interestingly, the table also indicates that 32% of the full sample and 36% of shifted firms' fees were charged to incumbent auditors on average for non-audit fees (NAF_RATE). This finding suggests the existence of economic bonding between auditors and their clients, which increases the independence risk associated with NAF.

Furthermore, Panel A of Table 2 indicates that 25% of firms sampled were characterized by having more than 50% of the attributes of the internal corporate governance composite measure (GOV) with a median score of 56%. In addition, the mean (median) of the following indices: the board of directors' index (BOARD), and audit committee index (AUDCOM) are 51% (55%) and 0.50 (0.67), respectively, indicating a reasonably symmetric distribution. Figure (2) shows that there is a substantial difference between firms' distribution of the GOV, BOARD, and AUDCOM. Approximately the mean (median) of the firm's financial health measured as the reverse of Altman z score (FIN_HEALTH) is -2.95 (-2.68), which means that most firms are financially healthy and are less likely to be under default risk. Around 25% of firms' market capitalization (MARKET_GROWTH) represents only 58% of the book value. In addition, Panel B of Table 2 shows that there is a significant difference between shifted and non-shifted firms over the study variables except SD (EARNINGS), and SD (OCF).

Panel A of Table 3 reports the Pearson correlation matrix. Interestingly, the correlation matrix shows two important results: *Firstly,* the UK firms' choice to misclassify interest payments positively and significantly correlates with the NAS fees, whatever NAF is measured as the proportion of NAS fees to the total fees (*NAF_RATE*) or the natural log of NAS fees (*LOG_NAF*). This finding emphasizes the economic bonding arising from NAS fees that compromise auditors' independence to detect managerial opportunistic behaviors that negatively affect the quality of financial statements. *Secondly,* better corporate governance *(GIV_INDEX)* correlates positively and significantly with the UK firm's interest payments classification shifting. In addition, Panel B

of Table 3 shows that the results of Variance Inflation Factor (VIF) tests indicate that the multicollinearity problem is not pronounced.

Table 2

Table 3
Figure 2

5.2 Multivariate analysis

To test our main hypotheses, we utilized a Probit regression model to empirically investigate the association between the classification shifting of interest payments and the economic bonding of NAF, measured both as the proportion of NAS fees to the total fees (NAF_RATE) and the natural log of NAS fees (LOG_NAF). Additionally, we controlled the corporate governance effectiveness using a composite measure (GOV) and separately considered the board of directors' index (BOARD) and audit committee index (AUDCOM). Furthermore, we incorporated key firm characteristics, including firm size, firm performance, growth opportunity, financial health, earnings uncertainty, and cash flow uncertainty.

The results of Probit regression are presented in Table 4. Our variable of interest is β_1 in columns (1:4). The findings show a positive and marginal significant association between classification shifting of interest payments and NAF where the NAF_RATE coefficient is 0.50 and 0.47 (In columns 1 and 2 respectively), which is positively significant at 1% as well as the LOG_NAF is 0.08 and 0.082, also positive and significant at 10% (In column 3 and 4 respectively). The economic significance is represented by multiplying the regression coefficient by its standard deviation, which is 0.48 for NAF_RATE (in column 1) and 0.91 for LOG_NAF (in column 3). In other words, if the percentage of NAF_RATE (or LOG_NAF) increases by one standard deviation, the dependent variable also increases by 0.48 (or 0.91).

We find that firms engaging in opportunistic classification shifting of interest payments are more likely to incur NAS fees. These results support hypothesis H1 of the study, indicating that providing NAF strengthens the economic bonding effect of NAS fees. This suggests that the provision of NAF increases the auditor's attachment to their audit clients, compromises auditors' independence and audit thoroughness, acquiesces to client pressure to allow opportunistic management, and dampens their ability and incentives to detect and report discretionary accounting practices opportunistically. This behavior aims to retain existing clients and align with managers' expectations of a firm's cash flows.

Arguably, the economic bonding between auditors and their clients tends to lessen their effectiveness in mitigating classification shifting. This result is consistent with contract theory and our expectation in the first hypothesis and is steady with the findings of Frankel et al. (2002) that the provision of NFE generates audit firms' income economic bonding, which tends to make auditors more likely to accept client pressure to accept opportunistic management of earnings. H1 is thus supported.

Table 4 also reveals the findings related to the impact of internal corporate governance on the classification shifting of interest payments. The results show that the association between internal corporate governance (GOV (coefficients 1.62 and 1.76 columns 2 and 4), BOARD (coefficients 0.74 and 0.89 columns 1 and 3), and AUDCOM (coefficients 0.77 and 0.77 column 1 and 3)) and classification shifting in all cases is positive and significant at 1%. So far, our analysis implies that managers in UK firms may consider classification shifting to be less costly and less likely, making them less reluctant to adopt other opportunistic management methods employed to attain managers' opportunistic targets when corporate governance quality is strengthened. Indeed, such opportunistic classification shifting is subject to less caution by either internal or external monitors (Zalata and Abdelfattah, 2021). It is plausible that interest payment classification shifting is considered a 'soft' opportunistic activity (Anagnostopoulou et al., 2021).

The regression coefficient on SIZE is significantly negative, as expected under the size hypothesis, implying that cash flows from operations are more crucial for small firms and more susceptible to manipulation in OCF. Consistent with Baik et al. (2016), the coefficient on OCF is significantly negative, suggesting that UK firms are more likely to use managerial discretion in interest payments classification shifting to report a high level of cash flows from operations when operating cash is crucial. Meanwhile, the uncertainty of OCF, or the standard deviation of OCF (SD(OCF)), increases, triggering firms to engage in classification shifting. Additionally, we find that the financial health coefficient on FIN_HEALTH is negative and significant, indicating that financially distressed firms have more incentives to engage in opportunistic behavior by misclassifying interest payments. This finding aligns with the results of Baik et al. (2016) and Lee (2012).

Table 4

To investigate our H2, we conducted probit regressions with an interaction variable (NAF*GOV) between NAF and the strength of internal corporate governance quality (GOV). This

analysis aims to examine whether the quality of internal corporate governance influences the relationship between interest payment classification shifting and firms' NAF. The results are reported in Table 5, revealing a significant and positive relationship between the classification shifting of interest payments and the interaction between NAF and GOV (NAF=NAF_RATE, coeff. 1.61, P<0.001, and NAF=NAF_LOG, coeff. 4.52, P<0.001). These findings suggest that managers in firms with strong corporate governance settings, who purchased NAS from their auditors, are more likely to engage in the classification shifting of interest payments.

The results support our Hypothesis 2 (H2), suggesting that managers in firms with stronger internal governance are likely to engage in less costly and softer opportunistic behavior, particularly with the economic bonding effect of NAF. In such cases, classification shifting is less likely to align with the interests of internal or external governance mechanisms and is less likely to be subject to scrutiny by internal or external monitors. This reduction in scrutiny lessens constraints on opportunistic classification shifting, providing an incentive for managers to engage in classification shifting.

Our findings align with research evidence. For example, Fan et al. (2010) showed that when firms are constrained from using accrual management, classification shifting is more likely to be the least costly opportunistic choice. Abernathy et al. (2014) found that when managers are constrained from using real management (accruals management), they are more likely to resort to classification shifting. However, good corporate governance encourages Indian firms' managers to manipulate cash flow as a substitute for earnings management (Nagar and Raithatha, 2016). Therefore, these findings provide evidence to suggest that the provision of NAS to audit clients increases the economic dependence of external auditors on their clients, threatens auditor independence, encourages auditors to accept firm managers' accounting issues, and reduces auditors' motivation to help in deterring myopic opportunistic behavior using classification shifting. In contrast, managers in the UK firms with strong governance are subject to proper supervision and could find classification shifting a less costly and softer choice to manipulate cash flows.

Table 5

To investigate our H3, we conducted probit regressions with an interaction variable (FIN_HEALTH) between firms' NAF and their financial health (FIN_HEALTH). This analysis aims to examine whether the firm's financial health, measured as the reverse of the Altman Z

score, influences the relationship between interest payment classification shifting and the firms' NAF. The results support our Hypothesis 3 (H3), as shown in Table 6. The interaction term between FIN_HEALTH and NAF is positive (β9= 0.07 (0.02)) and statistically significant at 5% and 10%. This implies that the effect of NAF on interest payment classification shifting is positive and increases in distressed firms. In other words, this finding suggests that firms with higher NAF are more likely to shift their interest payments from operating to financing cash flows when they have lower financial health, which increases the risk of default. Therefore, we infer that managers of financially distressed firms are likely to engage in less costly and softer opportunistic behavior to enhance their financial health, particularly with the economic bonding effect of NAF. In addition, we posit that financially distressed firms face less scrutiny from external auditors due to the economic bonding effect of NAF, which facilitates their classification-shifting practice.

Table 6

In sum, our study analysis provides three interesting and important empirical findings for regulators, investors, and shareholders: Firstly, the economic bonding of NAF between external auditors and their clients is more likely to encourage managers in UK firms to manipulate operating cash flows through shifting their interest payments. Secondly, this practice may be the less costly and soft manipulation choice of managers in UK firms with strong internal governance, especially when they have higher NAF. Thirdly, financially distressed firms are more prone to attempting to manipulate and engage in this practice and are more likely to face less scrutiny from external auditors who are bonded with their clients through NAF. Therefore, we conclude that NAF have a significant impact on the reporting behavior and quality of UK firms.

5.3 Additional analysis and robustness

5.3.1 Audit firm tenure

In this section, we investigate whether the tenure of the external audit firm influences the classification shifting of interest payments. This question is motivated by the literature debate over the relationship between long tenure and audit quality. Singer and Zhang (2018) refer to the findings that long auditor tenure negatively affects audit quality, leading to less timely discovery and correction of misstatements. In addition, Bell et al. (2015) show that audit quality declines in the long auditor tenure range and NAF becomes substantial, which may imply a loss of auditor independence and effectiveness. In the context of our research, We measured the audit firm tenure using two proxies: AUDIT_TENURE, following Zhou et al. (2023), which is "the number of

consecutive years that the client has retained the audit firm as of a given fiscal year-end"; and AUDIT_CHANGE, following Sierra-García et al. (2019), which is "a dummy variable that takes the value 1 if the client has changed its auditor since the previous year and zero". Figure (3) shows the sample audit firm tenure and audit firm distribution. Table 7 shows the results of the model (2) rerun after adding the AUDIT_TENURE as shown in Panel A and after adding the AUDIT_CHANGE as shown in Panel B. The results in all cases were positive but insignificant.

Table 7
Figure 3

5.3.2 Robust analysis

In this section, we test the robustness of our results concerning the endogeneity issue or reverse causality, which raises doubts about the direction of causality due to exogenous factors. Econometrically, endogeneity leads to biased and inconsistent parameter estimates, occurring when the dependent variables and the error term of the regression model are correlated (Li, 2016). The presence of endogeneity issues and the false attribution of causality can result in biased, inconsistent parameter estimates and a misinterpretation of the relationship between variables (Cho, 1998).

Accordingly, we test whether our results are mis-specified due to possible endogeneity between the NAF and interest payment classification shifting. We address the endogeneity issue by re-estimating our main analysis using two approaches to control for potential endogeneity: (1) one-year lag values of independent variables (Chang and Zhang, 2015; Li, 2016; Lu and Wang, 2015), and (2) the Generalized Method of Moments (GMM) approach. Following studies on corporate governance (e.g., Nekhili et al., 2022; Wintoki et al., 2012), this method effectively addresses endogeneities arising due to reverse causality and dynamic endogeneity by examining the dynamic nature of relationships and employing internal instruments. Therefore, this method allows us to obtain consistent and unbiased regression coefficient estimators.

The results of re-estimating the Probit regression model using one-year lag independent variables are shown in Table 8, Panel A. Panel B displays the results of re-estimating model (2) using the GMM approach. We couldn't find any evidence regarding the association between NAF and the classification shifting of interest payments reported in the main analysis using the two approaches. We found a truly positive and significant association between the classification shifting of interest payments and non-audit fees. The validity of the GMM results is checked using the Sargan-Hansen test, which is higher than 10%. Therefore, we accept the null hypothesis of the

Sargan-Hansen test. Based on these results, we can conclude that our main findings are not subject to the reverse causality issue.

Table 8

6. Summary and conclusion

This study empirically examined whether the economic bonding of NAF negatively impacts the auditor's reaction to audit clients' cash manipulation using a novel form - interest payments classification shifting. Additionally, examined whether this association is contingent on the quality of internal corporate governance and the firm's financial well-being.

Using a sample of UK firms, we find evidence that firms buying more NAF are more likely to manipulate cash flows through classification shifting of interest payments. Our empirical results indicate that the relation between NAF and classification shifting of interest payments is contingent on the extent of the internal governance quality. In addition, we show that managers of financially distressed firms, who purchase NAS services from their auditors, are more likely to resort to classification shifting of interest payments to avoid the cash flow risk and enhance the firm's financial health and well-being. These findings provide new empirical evidence that a close spotlight on the threats of NAF is potentially useful to regulators, shareholders, and investors.

Our findings are subject to the following limitations: First, this study uses a composite measure to measure the quality of internal corporate governance. It focuses only on the board of directors and audit committee, but this measure does not reflect other internal governance mechanisms. Second, this study is subject to limited study time due to the implementation of key IFRS standards (IFRS 9 Financial Instruments and IFRS 15 Revenue from Contract with Customers) from 2018/2019. Future research can address these limitations, consider external governance mechanisms, and empirically compare findings under different regulatory regimes.

Appendix: Variable Definitions

Variable	Definition	Measurement
Dependent variable:		
INTEREST_SHIFTING	Cash flow classification shifting	A dummy variable equals to one if the firm changed the classification of interest payments and zero otherwise
Independent Variables:		

NAF_RATE	Auditor's non-audit fees (NAF)	The relative level of non-audit service fees to total service fees to incumbent auditors.
LOG_NAF		The natural log of non-audit fees
BOARD	Board of directors' composite measure	*BOARD = ∑ (BOARDSIZE, DUAL, FINEXPERT, BOARDIND, INDOWN, BOARDMEETINGS) ÷ 6* Where: BOARDSIZE = equal to 1 when the firm a has board size less than the sample mean, zero otherwise; DUAL = equal to 1 when the firm separation of the CEO and the board chairman position, zero otherwise; FINEXPERT = equal to 1 when the firm has financial expert relative to board committee more than the sample mean, zero otherwise; BOARDIND = equal to 1 when the firm proportion of non-executive directors to board size is more than or equal to 50%, zero otherwise; INDOWN = equal to 1 when the proportion of independent directors' ownership is less than the sample mean, zero otherwise; BOARDMEETINGS = equal to 1 when the firm board of directors' number of meetings is more than the sample mean, zero otherwise.
AUDCOM	Audit committee' composite measure	*GOV = ∑ (COMSIZE, COMIND, COMFINEXPT) ÷ 3* Where: COMSIZE = equal to 1 when the firm has board audit committee size relative to board size more than the sample mean, zero otherwise; COMIND = equal to 1 when the firm proportion of non-executive directors to board committee size more than or equal 50%, zero otherwise; and COMFINEXPT= equal to 1 when the board audit committee encompass at least 3 members and at least one of them has financial experience, zero otherwise.
GOV	Composite internal corporate governance mechanisms measure	*GOV = ∑ (BOARDSIZE, DUAL, FINEXPERT, BOARDIND, INDOWN, BOARDMEETINGS, COMSIZE, COMIND, COMFINEXPT) ÷ 9*
FIN_HEALTH	The reverse of the Altman Z score financial distress	Altman's Z score = ((6.56 (Working capitalt-1/Total assetst-1))+(3.26 (Retained earningst-1/Total assetst-1)) +(6.72 (Profit before interest and taxt-1/Total assetst-1))+(1.05 (Common equityt-1/Total liabilitiest-1))) x -1
Control Variables:		
SIZE	Firm size	The natural logarithm of total assets at the beginning of the year.
MARKET_GROWTH	Market growth opportunities	The market to book value at the end of the year.
OCF	Operating cash flows	Operating cash flows scaled by lagged total assets.

SD(EARNINGS)	Uncertainty of earnings	The square root of the variance of earnings over the past three years divided by the market capitalization.
SD(OCF)	Uncertainty of cash flows from operating activities	The square root of the variance of OCF over the past three years scaled by market capitalization.
AUDIT_TENURE	The length of the audit firm-client relationship	The square root of the variance of earnings over the past three years divided by the market capitalization.
AUDIT_CHANGE	Change audit firm	A dummy variable equals 1 if the firm changed the audit firm compared with the prior period, and 0 otherwise.

References

A.Girau, E., Bujang, I., Paulus Jidwin, A., and Said, J. (2022), "Corporate governance challenges and opportunities in mitigating corporate fraud in Malaysia", *Journal of Financial Crime*, Vol. 29 No. 2, pp. 620-638. https://doi.org/10.1108/JFC-02-2021-0045

Asthana, S. C., and Boone, J. P. (2012), "Abnormal audit fee and audit quality", *Auditing: A Journal of Practice and Theory*, Vol. 31 No. 3, pp. 1-22. https://doi.org/10.2308/ajpt-10294

Abernathy, J. L., Beyer, B., and Rapley, E. T. (2014), "Earnings management constraints and classification shifting", *Journal of Business Finance and Accounting*, Vol. 41 No. (5–6), pp. 600–626. https://doi.org/10.1111/jbfa.12076

Alfonso, E., Cheng, C. S. A., and Pan, S. (2015), "Income Classification Shifting and Mispricing of Core Earnings", *Journal of Accounting, Auditing and Finance*, pp. 1-32. https://doi.org/10.1177/0148558x15571738

Anagnostopoulou, S. C., Gounopoulos, D., Malikov, K., and Pham, H. (2021), "Earnings management by classification shifting and IPO survival", *Journal of Corporate Finance*, Vol. 66 No. 135938. https://doi.org/10.1016/j.jcorpfin.2020.101796

Anagnostopoulou, S. C., and Tsekrekos, A. E. (2017), "The effect of financial leverage on real and accrual-based earnings management", *Accounting and Business Research*, Vol. 47 No. 2, pp. 191–236. https://doi.org/10.1080/00014788.2016.1204217

Anandarajan, A., Kleinman, G., and Palmon, D. (2012), "Is Non-audit fees a suitable proxy for auditor independence in the post-SOX period?", *Research in Accounting Regulation*, Vol. 24 No. 2, pp. 105-111.https://doi.org/10.1016/j.racreg.2012.05.003

Antle, R., Gordon, E., Narayanamoorthy, G., Zhou, L., Zhou, L., Antle, R., and Gordon, E. (2006), "The joint determination of audit fees, non-audit fees, and abnormal accruals. *Review of Quantitative Finance and Accounting*, Vol. 27, pp. 235–266. https://doi.org/10.1007/s11156-006-9430-y

Arrow, K. J. (1985), *The Economics of Agency*, Pratt, JW.; RJ Zeckhauser (H g.): Principals and Agents: The Structure of Business. Boston, 37–51.

Arruñada, B. (1999), *The Economics of Audit Quality*, *The Economics of Audit Quality*. Springer US. https://doi.org/10.1007/978-1-4757-6728-5

Ashbaugh, H., LaFond, R., and Mayhew, B. W. (2003), "Do nonaudit services compromise auditor independence? Further evidence", *The Accounting Review*, Vol. 78 No. 3, pp. 611–639. https://doi.org/10.2308/accr.2003.78.3.611

Baik, B., Cho, H., Choi, W., and Lee, K. (2016), "Who classifies interest payments as financing activities? An analysis of classification shifting in the statement of cash flows at the adoption of IFRS", *Journal of Accounting and Public Policy*, Vol. 35 No. 4, pp. 331–351. https://doi.org/10.1016/j.jaccpubpol.2015.11.003

Beattie, V., and Fearnley, S. (2002), "Auditor Independence and Non-audit fees: A Literature Review", *Institute of Chartered Accountants in England and Wales*. Institute of Chartered Accountants in England and Wales. http://eprints.gla.ac.uk/33531/

Bell, T. B., Causholli, M., & Knechel, W. R. (2015), "Audit firm tenure, non-audit services, and internal assessments of audit quality", *Journal of Accounting Research*, Vol. 53 No. 3, pp. 461-509. https://doi.org/10.1111/1475-679X.12078

Blay, A. D., and Geiger, M. A. (2013), "Auditor fees and auditor independence: Evidence from going concern reporting decisions", *Contemporary Accounting Research*, Vol. 30 No. 2, pp. 579–606. https://doi.org/10.1111/j.1911-3846.2012.01166.x

Blaylock, B., Gaertner, F., and Shevlin, T. (2014), "*Non-audit fees, long-term auditor–client relationships and earnings management*", *Accounting & Finance*, Vol. *48*, No. 2, 181–207. https://doi.org/10.1111/j.1467-629X.2008.00251.x

Brown, L. D., and Caylor, M. L. (2006), "Corporate governance and firm valuation", *Journal of Accounting and Public Policy*, Vol. 25 No. 4, pp. 409–434. https://doi.org/10.1016/j.jaccpubpol.2006.05.005

Carcello, J. v., Neal, T. L., Reid, L. C., and Shipman, J. E. (2020), "Auditor independence and fair value accounting: An examination of nonaudit fees and goodwill impairments", *Contemporary Accounting Research*, Vol. 37 No. 1, pp. 189–217. https://doi.org/10.1111/1911-3846.12514

Cassell, C. A., Giroux, G. A., Myers, L. A., and Omer, T. C. (2012), "The effect of corporate governance on auditor-client realignments", *Auditing: A Journal of Practice and Theory*, Vol. 31 No. 2, pp. 167-188. https://doi.org/10.2308/ajpt-10240

Charitou, A., Karamanou, I., and Kopita, A. (2018), "The determinants and valuation effects of classification choice on the statement of cash flows", *Accounting and Business Research*, Vol. 48 No. 6, pp. 613–650. https://doi.org/10.1080/00014788.2017.1407626

Choi, J. H., Kim, J. B., and Zang, Y. (2010), "Do abnormally high audit fees impair audit quality? ", *Auditing: A Journal of Practice and Theory*, Vol. 29 No. 2, pp. 115-140. https://doi.org/10.2308/aud.2010.29.2.115

Chin K, Firth M, Rui O. (2006), "Earnings management, corporate governance, and the market performance of seasoned equity offerings", *Journal of Contemporary Accounting and Economics,* Vol. 2 No. 1, pp. 73–98. https://doi.org/10.1016/S1815-5669(10)70017-5

Ching, K. M., Firth, M., and Rui, O. M. (2006), "Earnings management, corporate governance and the market performance of seasoned equity offerings in Hong Kong", *Journal of Contemporary Accounting and Economics*, Vol. 2 No. 1, pp. 73-98. https://doi.org/10.1016/S1815-5669(10)70017-5

Chung, H., and Kallapur, S. (2003), "Client importance, nonaudit services, and abnormal accruals", *The Accounting Review*, Vol. 78 No. 4, pp. 931-955.

Dao, M., Xu, H., and Pham, T. (2022), "Auditors' Responses to Classification Shifting: Evidence from U.S. Firms", *Accounting Horizons*, Vol. 36 No. 1, pp. 25–48. https://doi.org/10.2308/horizons-18-141

DeAngelo, L. E. (1981), "Auditor independence, "low balling", and disclosure regulation", *Journal of Accounting and Economics*, Vol. 3 No. 2, pp. 113–127. https://doi.org/10.1016/0165-4101(81)90009-4

DeAngelo, L. E. (1981), "Auditor size and audit quality", *Journal of Accounting and Economics*, Vol. 3 No. 3, pp. 183-199. https://doi.org/10.1016/0165-4101(81)90002-1

DeBerg, C. L., Kaplan, S. E., and Pany, K. (1991), "An examination of some relationships between non-audit fees and auditor change", *Accounting Horizons*, Vol. 5 No.1, pp. 17-28.

Dee, C. C., Lulseged, A., and Nowlin, T. S. (2006), "Prominent Audit Clients and the Relation between Discretionary Accruals and Non-Audit Service Fees", *Advances in Accounting*, Vol. 22 No. 6, pp. 123-148. https://doi.org/10.1016/S0882-6110(06)22006-6

DeFond, M. L., Raghunandan, K., and Subramanyam, K. R. (2002), "Do non-audit service fees impair auditor independence? Evidence from going concern audit opinions", *Journal of Accounting Research*, Vol. 40 No. 4, pp. 1247-1274. https://doi.org/10.1111/1475-679X.00088

DeFond, M., and Zhang, J. (2014), "A review of archival auditing research", *Journal of Accounting and Economics*, Vol. 58 No. (2–3), pp. 275-326. https://doi.org/10.1016/J.JACCECO.2014.09.002

Deloitte. (2016), "Audit independence KPIs. *Deloittee*, *November 2016*.

Boone, A. L., Field, L. C., Karpoff, J. M., and Raheja, C. G. (2007), "The determinants of corporate board size and composition: An empirical analysis", *Journal of financial Economics*, Vol. 85 No. 1, pp. 66-101. https://doi.org/10.1016/j.jfineco.2006.05.004

Dickins, D., and Skantz, T. (2010), "The impact of regulation on economic bonding and auditor independence: An analysis of sox and suggestions for future research", *Advances in Public Interest Accounting*, Vol. 15, pp. 1-21. https://doi.org/10.1108/S1041-7060(2010)0000015004

Duh, R. R., Lee, W. C., and Lin, C. C. (2009), "Reversing an impairment loss and earnings management: The role of corporate governance", *International Journal of Accounting*, Vol. 44 No. 2, pp. 113-137. https://doi.org/10.1016/J.INTACC.2009.03.001

Eilifsen, A., and Knivsflå, K. H. (2021), "Core earnings management: How do audit firms interact with classification shifting and accruals management?", *International Journal of Auditing,* Vol. 25 No. 1, pp. 142-165. https://doi.org/10.1111/ijau.12214

El Diri, M., Lambrinoudakis, C., and Alhadab, M. (2020), "Corporate governance and earnings management in concentrated markets", *Journal of Business Research*, Vol. 108, pp. 291-306. https://doi.org/10.1016/J.JBUSRES.2019.11.013

Fama, E. F., and Jensen, M. C. (1983), "Separation of ownership and control", *The Journal of Law and Economics*, Vol. 26 No.2, pp. 301-325.

Fan, Y., Barua, A., Cready, W. M., and Thomas, W. B. (2010), "Managing earnings using classification shifting: Evidence from quarterly special items", *The Accounting Review*, Vol. 85 No. 4, pp. 1303-1323. https://doi.org/10.2308/accr.2010.85.4.1303

Ferguson, M. J., Seow, G. S., and Young, D. (2004), "Nonaudit services and earnings management: UK Evidence", *Contemporary Accounting Research,* Vol. 21 No. 4. pp. 813-841. https://doi.org/10.1506/MFV5-9T3Q-H5RK-VC20

Ferramosca, S., Greco, G., & Allegrini, M. (2017), "External audit and goodwill write-off", *Journal of Management & Governance*, Vol. 21, pp. 907-934. https://doi.org/10.1007/s10997-016-9369-x

Financial Reporting Council. (2020), "*Objectives , outcomes and regulation*", *July 6*, pp. 1-4.

Frankel, R. M., Johnson, M. F., and Nelson, K. K. (2002), "The relation between auditors' fees for nonaudit services and earnings management", *The Accounting Review*, Vol. 77 No. (s-1), pp. 71-105. https://doi.org/10.2308/accr.2002.77.s-1.71

Friedman, H. L., and Mahieux, L. (2021), "How is the audit market affected by characteristics of the nonaudit services market?", *Journal of Accounting Research*, Vol. 59 No. 3, pp. 959-1020. https://doi.org/10.1111/1475-679X.12347

García-Meca, E., and Sánchez-Ballesta, J. P. (2009), "Corporate governance and earnings management: A meta-analysis", *Corporate Governance: An International Review*, Vol. 17 No.5, pp. 594-610. https://doi.org/10.1111/J.1467-8683.2009.00753.X

Geiger, M. A., and Rama, D. V. (2003), "Audit fees, nonaudit fees, and auditor reporting on stressed companies", *Auditing: A Journal of Practice and Theory*, Vol. 22 No.2, pp. 53-69. https://doi.org/10.2308/aud.2003.22.2.53

Gordon, E. A., Henry, E., Jorgensen, B. N., and Linthicum, C. L. (2017), "Flexibility in cash-flow classification under IFRS: determinants and consequences", *Review of Accounting Studies*, Vol. 22 No. 2, pp. 839-872. https://doi.org/10.1007/s11142-017-9387-1

Ghosh, A., Marra, A., and Moon, D. (2010), "Corporate boards, audit committees, and earnings management: pre-and post-SOX evidence", *Journal of Business Finance and Accounting*, Vol. 37 No. (9-10), pp. 1145-1176. https://doi.org/10.1111/j.1468-5957.2010.02218.x

Habib, A., and Islam, A. (2007), " Determinants and consequences of non-audit service fees: Preliminary evidence from Bangladesh", *Managerial Auditing Journal*, Vol. 22 No. 5, pp. 446-469. https://doi.org/10.1108/02686900710750748

Haw, I. M., Ho, S. S. M., and Li, A. Y. (2011), "Corporate governance and earnings management by classification shifting", *Contemporary Accounting Research*, Vol. 28 No. 2, pp. 517-553. https://doi.org/10.1111/j.1911-3846.2010.01059.x

Hohenfels, D., and Quick, R. (2020), "Non-audit fees and audit quality: evidence from Germany", *Review of Managerial Science*, Vol. 14 No. 5, pp. 959–1007. https://doi.org/10.1007/s11846-018-0306-z

Hoppe, E. I., and Schmitz, P. W. (2018), " Hidden action and outcome contractibility: An experimental test of moral hazard theory", *Games and Economic Behavior*, Vol. 109, pp. 544-564. https://doi.org/10.1016/J.GEB.2018.02.006

Hossain, S., Coulton, J., and Wang, J. J. (2023), "Client importance and audit quality at the individual audit partner, office, and firm levels", *Abacus*, *59*(2), 650-696. https://doi.org/10.1111/abac.12289

House of Commons Committee of Public Accounts. (2019), "*The Future of Audit Nineteenth Report of Session 2017-19 Report*", www.parliament.uk/copyright/

Huang, H. W., Mishra, S., and Raghunandan, K. (2007), "Types of nonaudit fees and financial reporting quality", *Auditing: A Journal of Practice and Theory*, Vol. 26 No.1, pp. 133-145. https://doi.org/10.2308/aud.2007.26.1.133

Reddy, B.V. (2019), "Thinking Outside the Box – Eliminating the Perniciousness of Box-Ticking in the New Corporate Governance Code", *The Modern Law Review*, Vol. 82, pp. 692-726. https://doi.org/10.1111/1468-2230.12415

Jensen, M. C., and Meckling, W. H. (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 40, pp. 305-360. https://doi.org/10.1016/0304-405X(76)90026-X

John, K., and Senbet, L. W. (1998), "Corporate governance and board effectiveness", *Journal of Banking and Finance*, Vol. 22 No.4, pp. 371-403. https://doi.org/10.1016/S0378-4266(98)00005-3

Krauß, P., Pronobis, P., and Zülch, H. (2015), "Abnormal audit fees and audit quality: Initial evidence from the German audit market", *Journal of Business Economics*, Vol. 85, pp. 45-84.

Klumpes, P., Komarev, I., and Eleftheriou, K. (2016), "The pricing of audit and non-audit fees in a regulated environment: A longitudinal study of the UK life insurance industry", *Accounting and Business Research*, Vol.46 No. 3, pp. 278–302. https://doi.org/10.1080/00014788.2015.1056719

Koh, K., Rajgopal, S., and Srinivasan, S. (2013), "Non-audit fees and financial reporting quality : evidence from 1978 to 1980", *Review of Accounting Studies*, Vol. 18, pp. 1–33. https://doi.org/10.1007/s11142-012-9187-6

Kowaleski, Z. T., Mayhew, B. W., and Tegeler, A. C. (2018), " The impact of consulting services on audit quality: An experimental approach", *Journal of Accounting Research*, Vol. 56 No. 2, pp. 673-711. https://doi.org/10.1111/1475-679X.12197

Krishnan, G. v. (2003), "Audit quality and the pricing of discretionary accruals", *Auditing: A Journal of Practice and Theory*, Vol. 22 No.1, pp. 109-126. https://doi.org/10.2308/aud.2003.22.1.109

Krishnan, G. v., and Yu, W. (2011), "Further evidence on knowledge spillover and the joint determination of audit and non-audit fees", *Managerial Auditing Journal*, Vol.26 No. 3, pp. 230-247. https://doi.org/10.1108/02686901111113181

Kinney Jr, W. R., and Libby, R. (2002), "Discussion of the relation between auditors' fees for nonaudit services and earnings management", *The Accounting Review*, Vol. 77 No. (s-1), pp. 107-114. https://doi.org/10.2308/accr.2002.77.s-1.107

Kuenzel, S., Krolikowska, E., and Kuenzel Ã, S. (2008), "The effect of bonds on loyalty towards auditors: the mediating role of commitment", *The Service Industries Journal*, Vol. 28 No. 5, pp. 685-700. https://doi.org/10.1080/02642060801988233

Lai, K. W. (2009), "Does audit quality matter more for firms with high investment opportunities? ", *Journal of Accounting and Public Policy*, *28*(1), 33–50. https://doi.org/10.1016/J.JACCPUBPOL.2008.11.002

Larcker, D. F., and Richardson, S. A. (2004), "Fees paid to audit firms, accrual choices, and corporate governance", *Journal of Accounting Research*, Vol. 42 No. 3, pp. 625-658. https://doi.org/10.1111/j.1475-679X.2004.t01-1-00143.x

Lee, H. Y. (2008), "The association between audit committee and board of director effectiveness and changes in the nonaudit fee ratio", *Applied Financial Economics*, Vol. 18 No. 8, pp. 629-638. https://doi.org/10.1080/09603100601166887

Lee, L. F. (2012), "Incentives to inflate reported cash from operations using classification and timing", *The Accounting Review*, Vol. 87 No. 1, pp. 1-33. https://doi.org/10.2308/accr-10156

Li, C. (2009), "Does client importance affect auditor independence at the office level? Empirical evidence from going-concern opinions", *Contemporary Accounting Research*, Vol. 26 No.1, pp. 201-230. https://doi.org/10.1506/car.26.1.7

Lim, C. Y., and Tan, H. T. (2008), "Non-audit service fees and audit quality: The impact of auditor specialization", *Journal of Accounting Research*, Vol. 46 No.1, pp. 199-246. https://doi.org/10.1111/j.1475-679X.2007.00266.x

Malikov, K., Manson, S., and Coakley, J. (2018), "Earnings management using classification shifting of revenues", *British Accounting Review*, Vol. 50 No. 3, pp. 291-305. https://doi.org/10.1016/j.bar.2017.10.004

Martín, C., and Herrero, B. (2018), "Boards of directors: Composition and effects on the performance of the firm", *Economic research-Ekonomska istraživanja*, Vol. 31 No. 1, pp. 1015-1041.

McVay, S. E. (2006), "Earnings management using classification shifting: An examination of core earnings and special items", *The Accounting Review*, Vol. 81 No. 3, pp. 501-531. https://doi.org/10.2308/accr.2006.81.3.501

Mitra, S., and Hossain, M. (2007), "Ownership composition and non-audit service fees", *Journal of Business Research*, *60*(4), 348-356. https://doi.org/10.1016/j.jbusres.2006.10.025

Nagar, N., and Raithatha, M. (2016), "Does good corporate governance constrain cash flow manipulation? Evidence from India", *Managerial Finance*, Vol. 42 No. 11, pp. 1034-1053. https://doi.org/10.1108/MF-01-2016-0028

Nagar, N., and Sen, K. (2016), "Classification Shifting in the Cash Flow Statement: Evidence from India", *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2710508

Noh, M., Moon, D., and Parte, L. (2017), "Earnings management using revenue classification shifting-evidence from the IFRS adoption period", *International Journal of Accounting and Information Management*, Vol. 25 No. 3, pp. 333-355. https://doi.org/10.1108/IJAIM-07-2016-0071

Noreen, E. (1988), "An Empirical Comparison of Probit and OLS Regression Hypothesis Tests", *Journal of Accounting Research*, Vol. 26 No. 1, pp. 119-133. https://www.jstor.org/stable/2491116

O'Sullivan, M., Percy, M., and Stewart, J. (2008), "Australian evidence on corporate governance attributes and their association with forward-looking information in the annual report", *Journal of Management and Governance*, Vol.12 No. 1, pp. 5-35. https://doi.org/10.1007/s10997-007-9039-0

Peasnell, K. v., Pope, P. F., and Young, S. (2005), "Board monitoring and earnings management: Do outside directors influence abnormal accruals?", *Journal of Business Finance and Accounting*, Vol. 32 No. (7–8), pp. 1311-1346. https://doi.org/10.1111/j.0306-686X.2005.00630.x

Persons, O. S. (2006), "Corporate governance and non-financial reporting fraud", *The Journal of Business and Economic Studies*, Vol. 12 No. 1, pp. 27-39.

Quick, R., Sattler, M., and Wiemann, D. (2013), "Agency conflicts and the demand for non-audit fees", *Managerial Auditing Journal*, Vol. 28 No. 4, pp. 323-344. https://doi.org/10.1108/02686901311311927

Rashid, A. (2016), "Managerial ownership and agency cost: Evidence from Bangladesh", *Journal of Business Ethics*, Vol.137, pp. 609-621. https://doi.org/10.1007/sl0551-015-2570-z

Reynolds, J. K., and Francis, J. R. (2000), "Does size matter? The influence of large clients on office-level auditor reporting decisions", *Journal of Accounting and Economics*, Vol. 30 No. 3, pp. 375-400. https://doi.org/10.1016/S0165-4101(01)00010-6

Sami, H., Wang, J., and Zhou, H. (2011), "Corporate governance and operating performance of Chinese listed firms", *Journal of International Accounting, Auditing and Taxation*, Vol. 20 No. 2, pp. 106-114. https://doi.org/10.1016/j.intaccaudtax.2011.06.005

Schneider, A., Church, B. K., and Ely, K. M. (2006), "Non-audit fees and auditor independence: A review of the literature", *Journal of Accounting Literature*, Vol. 25, pp.169-211.

Singer, Z., & Zhang, J. (2018), "Auditor tenure and the timeliness of misstatement discovery", *The Accounting Review*, Vol. 93 No. 2, pp. 315-338. https://doi.org/10.2308/accr-51871

Shan, Y. G., Troshani, I., and Loftus, J. (2021), "Managerial ownership, audit committees and non-audit fees. *Australian Journal of Management*, Vol. 46 No. 3, pp. 409-436. https://doi.org/10.1177/0312896220945763

Skinner, D. J., and Sloan, R. G. (2002), "Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio", *Review of Accounting Studies*, 7(2-3), 289-312.

Setia-Atmaja, L., Haman, J., and Tanewski, G. (2011), "The role of board independence in mitigating agency problem II in Australian family firms", *The British Accounting Review*, Vol. 43 No.3, pp. 230-246. https://doi.org/10.1016/j.bar.2011.06.006

Soppe, A. (2011), *Corporate Governance, Ethics and Sustainable Development*, Corporate Governance and Business Ethics, pp. 245-258. https://doi.org/10.1007/978-94-007-1588-2_11

Srinidhi, B. N., and Gul, F. A. (2007), "The differential effects of auditors' nonaudit and audit fees on accrual quality", *Contemporary Accounting Research*, Vol. 24 No. 2, pp. 595-629. https://doi.org/10.1506/ARJ4-20P3-201K-3752

Sierra-García, L., Gambetta, N., García-Benau, M. A., & Orta-Pérez, M. (2019), "Understanding the determinants of the magnitude of entity-level risk and account-level risk key audit matters: The case of the United Kingdom", *The British Accounting Review*, Vol. 51 No. 3, pp. 227-240. https://doi.org/10.1016/j.bar.2019.02.004

Svanström, T. (2013), "Non-audit fees and audit quality: Evidence from private firms", *European Accounting Review*, Vol. 22 No. 2, pp. 337-366. https://doi.org/10.1080/09638180.2012.706398

Tang, H. W., and Chang, C. C. (2015), "Does corporate governance affect the relationship between earnings management and firm performance? An endogenous switching regression model", *Review of Quantitative Finance and Accounting*, Vol. 45 No. 1, pp. 33-58. https://doi.org/10.1007/S11156-013-0427-Z

Tepalagul, N., and Lin, L. (2015), "Auditor independence and audit quality: A literature review", *Journal of Accounting, Auditing and Finance*, Vol. 30 No.1, pp. 101-121. https://doi.org/10.1177/0148558X14544505

Thomson Reuters. (2020), *Fees Paid to Auditors by FTSE 100 Companies Reach £911m as Audit Firms Respond to FRC's Calls to Raise Prices, shows Thomson Reuters study*, https://www.thomsonreuters.com/en/press-releases/2020/august/fees-paid-to-auditors-by-ftse-100-companies-reach-911m-as-audit-firms-respond-to-frcs-calls-to-raise-prices.html

Tsipouridou, M., and Spathis, C. (2012),"Earnings management and the role of auditors in an unusual IFRS context: The case of Greece", *Journal of International Accounting, Auditing and Taxation*, Vol. 21 No. 1, pp. 62-78. https://doi.org/10.1016/J.INTACCAUDTAX.2012.01.005

The Companies (Disclosure of Auditor Remuneration and Liability Limitation Agreements) Regulations 2008. https://www.legislation.gov.uk/uksi/2008/489/pdfs/uksi_20080489_en.pd

Usman, M., Nwachukwu, J., Ezeani, E., Salem, R. I. A., Bilal, B., and Kwabi, F. O. (2023), "Audit quality and classification shifting: evidence from UK and Germany", *Journal of Applied Accounting Research*. https://doi.org/10.1108/JAAR-11-2022-0309

Usman, M., Ezeani, E., Salem, R. I. A., and Song, X. (2022), "The impact of audit characteristics, audit fees on classification shifting: evidence from Germany", *International Journal of Accounting and Information Management*, Vol. 30 No. 3, pp. 408-426. https://doi.org/10.1108/IJAIM-12-2021-0252

Ward, A. J., Brown, J. A., and Rodriguez, D. (2009), "Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms", *Corporate Governance: An International Review*, Vol.17 No.5, pp. 646-660. https://doi.org/10.1111/j.1467-8683.2009.00766.x

Watts, R. L., and Zimmerman, J. L. (1990), "Positive accounting theory: A ten-year perspective", *The Accounting Review*, Vol.65 No.1, pp. 131-156.

Zaman, M., Hudaib, M., and Haniffa, R. (2011), "Corporate governance quality, audit fees and non-audit services fees. *Journal of Business Finance and Accounting*, Vol.38 No.(1-2), pp. 165-197. https://doi.org/10.1111/j.1468-5957.2010.02224.x

Zarefar, A., Azmi, N. A., Wan Ismail, W. A., & Kamarudin, K. A. (2023) , "The moderating effect of political connection on the relationship between non-audit fees and accounting quality: Evidence from an emerging market. *Cogent Economics & Finance*, Vol.11No.1, pp. 1-24. https://doi.org/10.1080/23322039.2023.2175457

Zalata, A. M., and Abdelfattah, T. (2021) , "Non-executive female directors and earnings management using classification shifting", *Journal of Business Research*, Vol.134, pp. 301-315. https://doi.org/10.1016/j.jbusres.2021.04.063

Zalata, A. M., and Roberts, C. (2017) , "Managing earnings using classification shifting: UK evidence", *Journal of International Accounting, Auditing and Taxation*, Vol. 29(April), pp. 52-65. https://doi.org/10.1016/j.intaccaudtax.2017.04.001

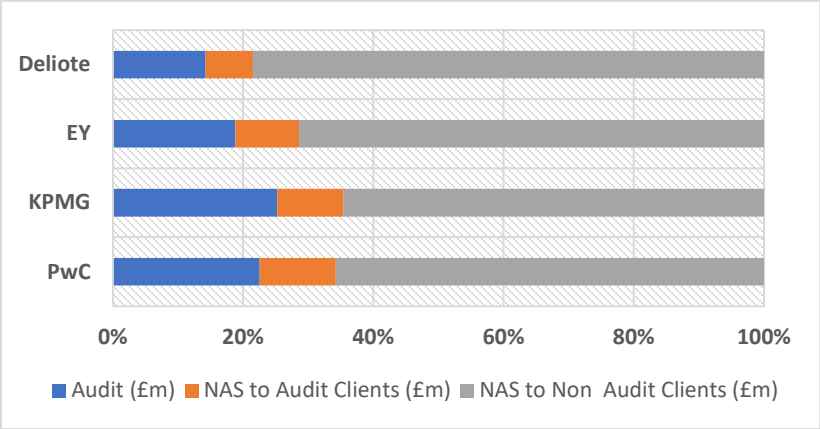
Zalata, A., and Roberts, C. (2016), "Internal corporate governance and classification shifting practices: An analysis of U.K. Corporate behavior", *Journal of Accounting, Auditing and Finance*, Vol. 31No.1, pp. 51-78. https://doi.org/10.1177/0148558X15571736

Zhang, E. X. (2020), "The impact of cash flow management versus accruals management on credit rating performance and usage", *Review of Quantitative Finance and Accounting*, Vol. 54 No. 4, pp. 1163-1193. https://doi.org/10.1007/s11156-019-00821-8

Zhou, Y., Weber, D.P. & Wen, C. (2023), "Selection bias in audit *firm tenure research", Review Accounting Studies* . https://doi.org/10.1007/s11142-023-09787-4

Figure 1.

The big 4 UK accountancy firms fees income, 2017



Source: The UK House of Commons report "The Future of Audit"

Table 1.
Sample selection

	Firm - Year Observations
Initial sample	4,076
Exclusions:	
Financial firms.	1060
Dissolved and in liquidation firms.	55
Firm with missing data	858
Final sample (Total observations)	2103

Table 2.
Descriptive Statistics

Panel A: Full Sample Descriptive Statistics

Variables	**Mean**	**Median**	**SDV**	**Q1**	**Q3**
INTEREST_SHIFTING	0.18	0	1	0	0
NAF_RATE	0.32	0.30	0.96	0.16	0.45
LOG_NAF	5.57	5.53	10.87	2	2.85
BOARD	0.51	0.50	0.83	0.33	0.66
AUDCOM	0.55	0.67	1.000	0.33	1
GOV	0.53	0.56	0.89	0.33	0.67
SIZE	13.78	13.68	19.61	12.56	14.86
FIN_HEALTH	-2.95	-2.68	179.3	-4.55	-1.17
MARKET_GROWTH	1.39	1	27.34	0.58	1.70
OCF	0.10	0.09	2.80	0.05	0.15
SD(EARNINGS)	0.04	0.02	14.33	0	0.03
SD(OCF)	0.05	0.02	5.87	0.01	0.05

Panel B: Descriptive statistics: Shifted firms vs. non-shifted firms

	Non-Shifted Firms (N=1686)			**Shifted Firms (N=422)**			**Test of Difference between mean**	
Variables	**Mean**	**Median**	**SDV**	**Mean**	**Median**	**SDV**	**t-statistic**	**P value**
NAF_RATE	0.32	0.29	0.21	0.36	0.35	0.21	-3.82	0.00***
LOG_NAF	2.45	2.44	0.67	2.33	2.32	0.67	3.30	0.00***
BOARD	0.50	0.50	0.19	0.56	0.67	0.19	-5.48	0.00***
AUDCOM	0.57	0.67	0.35	0.67	0.67	0.36	-5.23	0.00***

GOV	0.52	0.56	1.83	0.60	0.56	0.20	-6.42	0.00***
SIZE	14.01	13.86	1.83	13.50	13.43	1.69	5.52	0.00***
FIN_HEALTH	-2.81	-2.63	7.44	-3.87	-3.34	6.80	3.53	0.00***
MARKET_GROWTH	1.36	0.99	1.41	1.84	1.27	2.15	-5.84	0.00***
OCF	0.10	0.10	0.14	0.09	0.09	0.12	2.16	0.03**
SD(EARNINGS)	0.04	0.02	0.09	0.03	0.01	0.08	0.568	0.569
SD(OCF)	0.05	0.02	0.11	0.05	0.02	0.08	-.492	0.619

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions.**

Figure 2.

Internal Governance Distribution

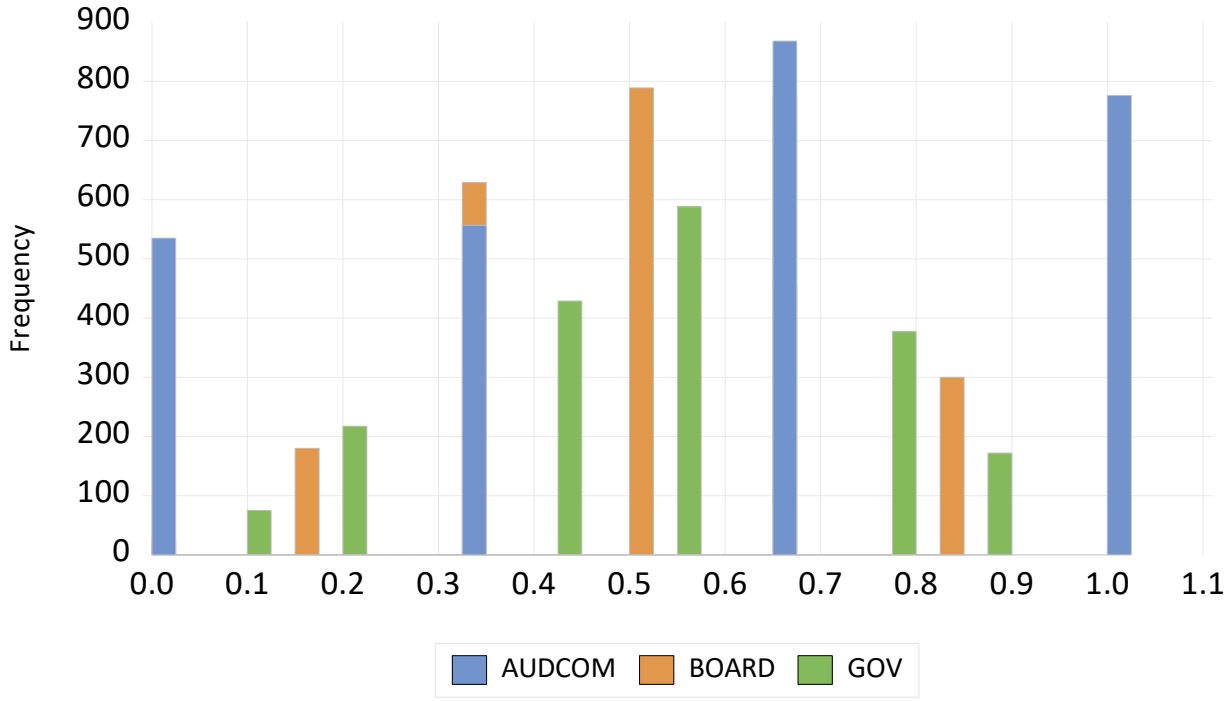


Table 3.

Pearson correlation matrix and variance inflation factor (VIF)

Panel A: Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) INTEREST_SHIFTING	1											
(2) NAF_RATE	0.07*	1										
(3) LOG_NAF	0.06*	0.91	1									
(4) BOARD	0.15	0.03**	0.04**	1								
(5) AUDCOM	0.14	-0.01**	0.00***	0.33	1							
(6) GOV	0.18	0.01**	0.03**	0.83	0.80	1						
(7) SIZE	-0.10	-0.02**	0.00***	0.05*	0.36	0.25	1					
(8) FIN_HEALTH	-0.03**	0.03**	0.03**	-0.05*	-0.05*	-0.07*	-0.06*	1				
(9) MARKET_GROWTH	0.10	-0.02**	-0.01**	-0.06*	-0.06**	-0.08*	-0.33	-0.01**	1			
(10) OCF	-0.03**	-0.01**	-0.02**	0.07*	0.11	0.11	0.08*	-0.52	-0.09*	1		
(11) SD(EARNINGS)	-0.03**	-0.02**	-0.03**	0.01**	-0.05**	-0.02**	-0.03**	0.13	-0.17	-0.12	1	
(12) SD(OCF)	-0.01**	-0.01**	-0.01**	-0.06*	-0.11	-0.10	-0.07*	0.12	-0.21	-0.10	0.64	1

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions.**
See Appendix for variable definitions.

Panel B: Variance inflation factor

	NAF_RATE	LOG_NAF	BOARD_	AUDCOM_	GOV	SIZE	FIN_HEALTH	MARKET_ GROWTH	OCF	SD(EARNINGS)	SD(OCF)
Variance inflation factor- VIF	1.016	1.014	1.13	1.44	1.16	1.56	1.34	1.28	1.36	1.67	1.76

Note(s): See Appendix for variable definitions.

Table 4.

Association between interest payments classification shifting and non-audit fees.

	Column (1) NAF_RATE			Column (2) NAF_RATE			Column (3) LOG_NAF			Column (4) LOG_NAF		
Variables	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***
Intercept	-0.32	-0.91 (0.36)		-0.61	-1.86 (0.06*)		-0.03	-0.07 (0.94)		-0.277	-0.812 (0.41)	
NAF_RATE	0.50	3.21 (0.00***)	0.48	0.47	3.06 (0.00***)	0.45						
LOG_NAF							0.08	1.76 (0.07*)	0.91	0.082	1.725 (0.08*)	0.079
BOARD	0.74	4.03 (0.00***)	0.61				0.89	4.67 (0.00***)	0.74			
AUDCOM	0.77	6.95 (0.00***)	0.77				0.77	6.79 (0.00***)	0.77			
GOV				1.62	9.16 (0.00***)	1.44				1.760	9.589 (0.00***)	1.567
SIZE	-0.10	-4.24 (0.00***)	-1.99	-0.08	-3.67 (0.00)	-1.61	-0.11	-4.32 (0.00***)	-2.10	-0.091	-3.943 (0.00***)	-1.792
FIN_HEALTH	-0.02	-3.24 (0.00***)	-3.74	-0.02	-3.24 (0.00***)	-3.80	-0.02	-2.35 (0.02**)	-2.91	-0.016	-2.281 (0.023**)	-2.868
MARKET_GROWTH	0.04	2.10 (0.03**)	1.20	0.05	2.34 (0.02**)	1.33	0.04	1.91 (0.06*)	1.11	0.045	2.117 (0.034**)	1.231
OCF	-0.93	-3.28 (0.00***)	-2.61	-0.92	-3.22 (0.00***)	-2.57	-0.77	-2.61 (0.00***)	-2.17	-0.751	-2.524 (0.012)	-2.104
SD(EARNINGS)	-0.86	-1.85 (0.064*)	-12.35	-0.89	-1.90 (0.06*)	-12.78	-0.76	-1.58 (0.11)	-10.93	-0.792	-1.636 (0.10)	-11.347
SD(OCF)	0.81	2.05 (0.04**)	0.48	0.83	2.07 (0.04**)	4.85	0.75	1.86 (0.06*)	4.43	0.766	1.873 (0.06**)	4.496
Industry fixed effects	Included			Included			Included			Included		
Pseudo R^2	0.087			0.088			0.084			0.086		
Likelihood ratio χ^2	184.4 (0.00)			177.03 (0.00)			178.4 (0.00)			173.4 (0.00)		

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions.**

Table 5.

Association between interest payments classification shifting and non-audit fees *(Interaction between Non-audit fees and internal corporate governance quality)*

	(1) - NAF_RATE			(2) - LOG_NAF		
Variables	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***
Intercept	-0.59	-1.79 (0.07*)		-1.59	-2.50 (0.01**)	
NAF_RATE	0.40	2.58 (0.00***)	0.39			
LOG_NAF				0.08	1.48 (0.14)	0.83
GOV	1.61	9.06 (0.00***)	1.43	4.52	4.30 (0.00***)	4.02
SIZE	-0.08	-3.73 (0.00***)	-1.64	-0.10	-4.14 (0.03**)	-2.06
FIN_HEALTH	-0.02	-3.05 (0.00***)	-3.59	-0.02	-2.20 (0.00***)	-3.22
MARKET_GROWTH	0.05	2.55 (0.00***)	1.46	0.04	1.88 (0.06*)	1.18
OCF	-0.86	-3.02 (0.00***)	-2.42	-0.66	-2.00 (0.05*)	-1.85
SD(EARNINGS)	-0.91	-1.92 (0.00***)	-13.01	-1.69	-2.72 (0.01**)	-24.23
SD(OCF)	0.85	2.11 (0.06*)	5.01	1.32	2.97 (0.00***)	7.75
NAF*GOV	1.61	9.06 (0.00***)	1.43	4.52	4.30 (0.00***)	4.02
Industry fixed effects	Included			Included		
Pseudo R^2	0.089			0.098		
Likelihood ratio χ^2	188.24 (0.00***)			174.77 (0.00***)		

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions.**

Table 6.

Association between interest payments classification shifting and non-audit fees *(Interaction between Non-audit fees and firm's financial health)*

	(1) - NAF_RATE			(2) - LOG_NAF		
Variables	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***	***Coefficient***	***z-Stat (Prob.)***	***Economic Significance***
Intercept	-5.08	-3.28 (0.00***)		0.09	0.23 (0.82)	
NAF_RATE	14.36	3.05 (0.00***)	13.782			
LOG_NAF				0.07	1.39 (0.17)	0.78
GOV	1.62	9.13 (0.00***)	1.44	1.83	9.22 (0.00***)	1.63
SIZE	-0.08	-3.50 (0.00***)	-1.54	-0.11	-4.22 (0.00***)	-2.10
FIN_HEALTH	-0.02	-3.36 (0.00***)	-3.73	0.07	1.54 (0.12)	12.93
MARKET_GROWTH	0.06	2.30 (0.00***)	1.54	0.06	2.53 (0.01**)	1.60
OCF	-1.06	-3.64 (0.00***)	-2.96	-0.84	-2.50 (0.01**)	-2.36
SD(EARNINGS)	-0.86	-1.83 (0.07*)	-12.27	-1.62	-2.65 (0.00***)	-23.28
SD(OCF)	0.82	2.06 (0.04**)	4.82	1.33	2.96 (0.00***)	7.79
NAF* FIN_HEALTH	0.07	2.30 (0.02**)	0.08	0.02	1.87 (0.06*)	0.70
Industry fixed effects	Included			Included		
Pseudo R^2	0.089			0.096		
Likelihood ratio χ^2	187.61 (0.00***)			171.53 (0.00***)		

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions.**

Figure 3.

Audit Firm Tenure and Audit Firm Distribution

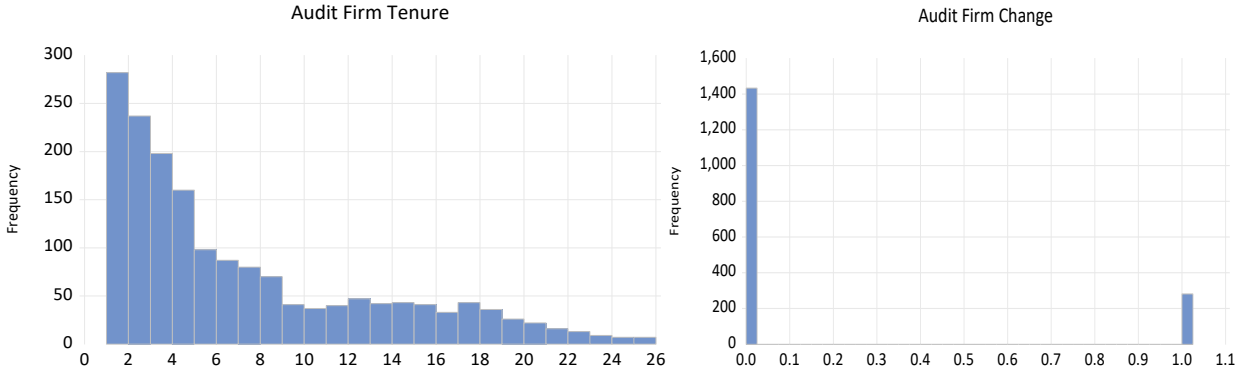


Table 7.

Association between interest payments classification shifting and non-audit fees *(After adding audit firm tenure as a control variable)*

Panel A: Audit Firm Tenure

	(1) - NAF_RATE			(2) - LOG_NAF		
Variables	***Coefficient***	***z-Stat***	***Prob.***	***Coefficient***	***z-Stat***	***Prob.***
Intercept	-0.40	-0.75	0.46	0.40	0.74	0.46
NAF_RATE	0.67	3.48	0.00***			
LOG_NAF				0.14	2.19	0.03**
GOV	1.27	4.78	0.00***	1.35	4.96	0.00***
SIZE	-0.07	-2.08	0.04**	-0.10	-2.92	0.00***
FIN_HEALTH	0.00	0.22	0.83	0.01	0.41	0.68
MARKET_GROWTH	0.14	2.63	0.01**	0.12	2.22	0.03**
OCF	-2.63	-3.50	0.00***	-2.56	-3.32	0.00***
SD(EARNINGS)	-4.14	-3.22	0.00***	-3.70	-3.01	0.00***
SD(OCF)	2.15	3.24	0.00***	2.12	3.18	0.00***
AUDIT_TENURE	0.01	0.84	0.40	0.01	1.40	0.16
Industry fixed effects	Included			Included		
Pseudo R^2	0.093			0.098		
Likelihood ratio χ^2	125.53 (0.00***)			125.07 (0.00***)		

Notes. *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions**

Panel B: Audit Firm Change

	(1) - NAF_RATE			(2) - LOG_NAF		
Variables	***Coefficient***	***z-Stat***	***Prob.***	***Coefficient***	***z-Stat***	***Prob.***
Intercept	-0.42	-0.80	0.42	0.34	0.64	0.525
NAF_RATE	0.68	3.53	0.00***			
LOG_NAF				0.14	2.27	0.023
GOV	1.29	4.83	0.00***	1.37	5.03	0.00***
SIZE	-0.06	-1.98	0.049**	-0.08	-2.72	0.00***
FIN_HEALTH	0.00	0.19	0.85	0.006	0.35	0.723
MARKET_GROWTH	0.13	2.55	0.01	0.12	2.11	0.03**
OCF	-2.55	-3.43	0.00***	-2.44	-3.19	0.00***
SD(EARNINGS)	-4.14	-3.21	0.00***	-3.70	-3.00	0.00***
SD(OCF)	2.08	3.14	0.00***	2.02	3.04	0.00***
AUDIT_CHANGE	0.04	0.37	0.71	0.05	0.40	0.690
Industry fixed effects	Included			Included		
Pseudo R^2	0.093			0.097		
Likelihood ratio χ^2	124.95 (0.00***)			123.27 (0.00***)		

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions**

Table 8.

Association between interest payments classification shifting and non-audit fees (Controlling endogeneity issue)

Panel A: One period lagged exoplanetary variables approach

	(1) - NAF_RATE			(2) - LOG_NAF		
Variables	***Coefficient***	***z-Stat***	***Prob.***	***Coefficient***	***z-Stat***	***Prob.***
Intercept	-0.58	-1.69	0.09*	-0.29	-0.83	0.41
NAF_RATE	0.45	2.76	0.00***			
LOG_NAF				0.09	1.75	0.08*
GOV	1.69	9.02	0.00***	1.84	9.51	0.00***
SIZE	-0.08	-3.55	0.00***	-0.09	-3.73	0.00***
FIN_HEALTH	-0.02	-3.23	0.00***	-0.02	-2.29	0.02**
MARKET_GROWTH	0.05	2.16	0.03**	0.04	1.96	0.05*
OCF	-0.93	-3.16	0.00***	-0.77	-2.51	0.00***
SD(EARNINGS)	-0.78	-1.62	0.10	-0.69	-1.38	0.17
SD(OCF)	0.83	2.06	0.04**	0.79	1.91	0.06*
Industry fixed effects	Included			Included		
Pseudo R^2	0.088			0.091		
Likelihood ratio χ^2	169.22 (0.00***)			167.21 (0.00***)		

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions**

Panel B: Panel generalized method of moments approach

	(1) - NAF_RATE			(2) - LOG_NAF		
Variables	***Coefficient***	***t-Stat***	***Prob.***	***Coefficient***	***t-Stat***	***Prob.***
Intercept	0.19	1.89	0.06	0.324	3.059	0.00***
NAF_RATE	0.22	2.60	0.01**			
LOG_NAF				0.042	1.762	0.08*
GOV	0.55	9.16	0.00***	0.623	9.849	0.00***
SIZE	-0.02	-3.13	0.00***	-0.023	-3.514	0.00***
FIN_HEALTH	-0.01	-3.48	0.00***	-0.006	-2.461	0.01**
MARKET_GROWTH	0.03	3.02	0.00***	0.023	2.423	0.02**
OCF	-0.74	-4.36	0.00***	-0.580	-3.272	0.00***
SD(EARNINGS)	-0.44	-1.69	0.09*	-0.404	-1.449	0.00***
SD(OCF)	0.48	2.34	0.02**	0.480	2.327	0.02**
Industry fixed effects	Included			Included		
Adjusted R^2	0.08			0.08		
The Sargan–Hansen test/ J statistics (Prob)	5.73 (0.33)			4.33 (0.265)		

Note(s): *, **, * indicate significance at 1%, 5%, and 10% levels in a two-tailed test, respectively. See Appendix for variable definitions.**