University of Tehran Press

Interdisciplinary Journal of Management Studies (IJMS) Online ISSN: 2981-0795

Home Page: https://ijms.ut.ac.ir

Regulation and Audit Fees for Initial Audit Engagements

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ARTICLE INFO

Article type:
Research Article

Article History:
Received 02 August 2024
Revised 10 October 2024
Accepted 19 October 2025
Published Online 31 May 2026

Keywords:
Audit fee discounts,
Initial audit engagements,
Audit regulation,
Bargaining power.

ABSTRACT

This study examines whether the audit firm ranking (AFR) mandated by the Securities and Exchange Organization (SEO) in Iran in 2013 is associated with audit fees for initial audit engagements. We propose that such regulation, in a highly competitive and compliance-driven market, could differently impact the bargaining power of auditors. Our findings indicate that audit fee discounts in initial engagements have decreased in the post-AFR era. Additionally, in line with the bargaining power perspective, audit fee discounts are greater when switching to non-Top auditors compared to Top auditors (first-ranked Trusted Audit Firms by SEO), when switching within non-Top auditors as opposed to Top auditors, and when switching from Top to non-Top auditors rather than from non-Top to Top auditors. The results are robust across several sensitivity tests and offer policy, practice, and research implications by exploring audit fee discounts in initial engagements arising from regulatory initiatives.

Cite this article: Mohammad Rezaei, F.; Dolatzarei, E.; Faraji, O. & Rezaee, Z. (2026). Regulation and Audit Fees for Initial Audit Engagements. *Interdisciplinary Journal of Management Studies* (*IJMS*), 19 (3), 497-525. http//doi.org/10.22059/ijms.2025.380306.676927

 Publisher: University of Tehran Press.
DOI: http//doi.org/10.22059/ijms.2025.380306.676927

1. Introduction

Lowballing in initial audit engagements has been a concern for legislators, practitioners, and academics over the past several decades (e.g., SEC, 1978; PCAOB, 2011). Many worry that a newly appointed auditor may attempt to recover losses from initial fee discounts in future years, potentially compromising auditor independence. The PCAOB (2011) attributes the high failure rate of initial engagements to unrealistic pricing, or lowballing. However, mainstream research on audit fee discounting suggests that lowballing does not necessarily undermine audit quality (e.g., Cho et al., 2021; Omer & Yuan, 2024).

The topic of lowballing and audit fee discounting in initial audit engagements has been under investigation for a considerable time (e.g., DeAngelo, 1981; Ettredge & Greenberg, 1990; Simon & Francis, 1988). The intensification of research in this area over the past five years (e.g., Barua et al., 2020[1]; Cho et al., 2021; Desai et al., 2024; Liu & Huang, 2024; Novak & Knechel, 2023; Omer & Yuan, 2024) underscores its significance and ongoing development. Previous studies, including Craswell and Francis (1991), Ghosh and Lustgarten (2006), and Omer and Yuan (2024), often focus on markets dominated by Big N audit firms. However, even in these markets, results remain inconclusive. For instance, findings from Craswell and Francis (1991), Gregory and Collier (1996), and Omer and Yuan (2024) indicate that clients tend to receive greater fee discounts when switching to Big N auditors. Conversely, evidence from Ghosh and Lustgarten (2006) suggests the opposite. Moreover, Peel (2013) demonstrates that the audit fee discount associated with Big N firms is dependent on the client's size. These studies utilize diverse theoretical frameworks, such as economic theories (Craswell & Francis, 1991), market structure theories (Ghosh & Lustgarten, 2006), and market share enhancement theories (Omer & Yuan, 2024), to interpret their varying results. Additionally, there is limited research on lowballing in markets without Big N dominance or presence (Azizkhani et al., 2022). In such markets, intense competition among auditors and client reluctance to pay premium fees for superior audit quality (Langli & Sovanstrom, 2014; Jing, 2019) heighten regulatory[2] concerns about lowballing's negative impact on price competition among auditors[3] (Jing, 2019).

One such market is the Iranian audit market where: (i) Big N audit firms have been banned since the 1979 Revolution; (ii) there is intense competition among local auditors (Bagherpour et al., 2014); and (iii) despite evidence from Mirshekary and Saudagaran (2005) indicating that audited financial statements are value-relevant, the main players[4] in client firms primarily demand "check-the-box" compliance-based services. Consequently, the potential adverse effects of low audit fees in general, and fee discounts in initial engagements specifically, have raised significant concerns among practitioners (e.g., Bozorgasl, 2010) as well as authorities such as the Iranian Association of Certified Public Accountants (IACPA) and the Admission and Oversight Committee of Trusted Audit Firms (AOCTAF, 2019) [5]. To address these concerns, the Securities and Exchange Organization (SEO) issued Audit Firm Ranking (AFR) guidelines in 2013 to stimulate both the demand and supply sides of the audit market. This ranking system categorizes Trusted Audit Firms (TAFs), which average around 70 firms, and the companies listed and registered by the SEO (clients) into four classes (first, second,

1. Unlike Barua et al. (2020) in the US research environment, in Iran the auditor is elected at the annual general meeting of the previous year, which must be held no later than four months after the end of the firm's fiscal year. Therefore, the new auditor is responsible for auditing both the mid-year financial statements and the end-year in the first year of the audit engagement.

2. Chinese regulator mandated a price floor on audit fees in 2010 (Jing, 2019).

3."From the supply side, lowing audit fees is an effective way to attract clients, especially in a competitive market such as China" (Jing, 2019, p. 73).

4. With the active presence of majority shareholders as CEO or board member in the company, other forms of agency problems such as those between majority and minority shareholders are conceivable; however, minority shareholders and other stakeholders do not play a significant role in the demand for quality (MohammadRezaei & Mohd-Saleh, 2017) despite their need for quality auditing (Mirshekary & Saudagaran, 2005).

5. *The 2019 Performance Report of AOCTAF* contains a section titled "*Audit Firms' Poor Financial Backing and Low Audit Fees*," stating that "... assurance services are the main source of revenue for Iranian audit firms, while other services account for a small portion of their revenue. Meanwhile, despite the efforts of the IACPA, competition over clients and the resulting lowballing have become a significant problem that will most likely have detrimental outcomes. Low audit fees, the small size of audit firms and their dependence on clients, low salaries and benefits of staff, and high turnover rate among professional staff are mainly due to the poor financial backing of audit firms, which acts as an obstacle to quality improvement in the audit industry."

third, and fourth) based on specific criteria. The ranking system has introduced new forms of quality differentiation between auditors: first-ranked TAFs are considered Top auditors, while others are classified as non-Top (MohammadRezaei et al., 2018).

We investigate whether the AFR as a regulatory initiative, along with differences in bargaining power between different classes of auditors (Top vs. non-Top), explains variations in audit fee discounts. We posit that AFR may serve as a regulatory mechanism to reduce fee discounts in initial engagements in two ways. First, the number and market share of auditors with higher bargaining power (Top) have increased in the post-AFR era. Second, the rank of an audit firm in engagements is equal to or higher than that of the client firms in the post-AFR period. This creates greater alignment between the bargaining powers of auditors and clients, preventing large clients with significant bargaining power from choosing auditors with lower bargaining power (non-Top auditors) (MohammadRezaei et al., 2018). Moreover, prior research (Cho et al., 2021; Huang et al., 2009; Ghosh & Lustgarten, 2006) suggests that fee discounts in initial audit engagements are not uniform across all auditors and largely depend on their bargaining power. In Iran, where international audit firms are absent, Top auditors tend to have more bargaining power than non-Top auditors, primarily due to their reputation. It is also likely that audit fees are higher for Top auditors in Iran (e.g., MohammadRezaei et al., 2018), leading to greater audit fee discounts in initial engagements when switching to non-Top auditors compared to Top auditors, switching within non-Top auditors compared to Top auditors, and switching from Top to non-Top firms compared to non-Top to Top firms. These possibilities introduce a tension in our research hypothesis regarding whether fee discounts vary among different classes of auditors following the implementation of the SEO's ranking system.

We utilized data from firms listed on the Tehran Stock Exchange (TSE) from 2006 to 2019. Due to the limited number of cross-sectional observations per year and the high inflation rate in Iran, it was impractical to apply cross-sectional level models. Therefore, following prior research (e.g., Cho et al., 2021; Ghosh & Lustgarten, 2006), we employed a first difference specification, adjusting for inflation, the advantages[1] of which are thoroughly discussed by Ghosh and Lustgarten (2006). Our main findings remain robust across several dimensions: (1) we addressed endogeneity issues through both propensity score matching (PSM) analysis to mitigate functional form misspecification and the Heckman two-stage procedure to correct for sample selection bias; (2) we examined changes in audit fees in the years following initial engagements; (3) we tested various fee level specifications; (4) we analyzed the differences in audit quality stemming from higher audit fee discounts; (5) we considered mismatches in client and auditor rankings relative to fee discounts; (6) we accounted for clients' bargaining power; (7) we included both voluntary and mandatory auditor switches; (8) we distinguished between market power and bargaining power; and (9) we evaluated the impact of AFR and different types of auditor switching. Armstrong et al. (2022) and Leuz (2022) highlight that effective identification transcends merely employing a particular method or "shock" (Leuz, 2022, p. 11). In line with Armstrong et al. (2022), we adopted a complementary approach that integrates theoretical frameworks, institutional knowledge, fixed effects (first difference models), and various specifications to eliminate alternative explanations.

This study contributes to the literature in several ways. First, it enhances our understanding of the effects of audit regulation on audit fees in initial engagements. Our findings align with those of Jing (2019), which suggest that audit pricing regulation in China has a more positive impact on smaller auditors. Second, this study provides insights into the factors influencing fee discounts in initial audits within a highly competitive audit market, which is significant given the global concerns about increased market concentration. Our results indicate that some auditors (Top) offer lower fee discounts for initial engagements compared to others (non-Top) in a purely compliance-based market. In such markets, where differentiators like Big N and industry experts[2] are absent, auditors cannot use quality-

1. One of the advantages of using first difference models is that these types of models directly measure temporary changes in audit fees (Ghosh & Lustgarten, 2006). In first difference models, "the influence of time-invariant unobservable variables cancels out and any relation that remains cannot be attributable to endogeneity that arises from such an effect" (Brown et al., 2011, p. 106).

2. Since there are no industry specialists and non-audit fees in the Iranian audit market unlike other countries such as the US, the results of the present research can be more objective because they are not influenced by the confounding effect of auditor industry specialization on audit fee.

based discrimination strategies to mitigate competitive pressure. The key contribution of our findings is that differences in audit fee discounts arise through discrimination based on a label assigned by the legislature (SEO), which does not necessarily reflect higher audit quality (MohammadRezaei et al., 2018). Third, prior studies (e.g., Oxera, 2006) often investigate fee discounts in markets with low auditor turnover, such as the United Kingdom in 2004, where turnover was only 1.2% for FTSE1 100 companies. In contrast, the high auditor turnover rate in the Iranian market (about 30%) provides a richer context for examining this issue.

Furthermore, while the role of audit regulation in audit fees has garnered attention primarily in U.S.-centric research (e.g., Desir et al., 2014; Huang et al., 2009), there is limited evidence on the impact of regulation on fee discounting in initial engagements outside this setting. Finally, although Big N firms do not operate in the Iranian market[2], the findings of this study are relevant to regulators, practitioners, client firms, and academics interested in audit markets with similar characteristics, such as small audit firm markets (e.g., Bianchi et al., 2019) and the audit markets of private companies (e.g., Langli & Svanström, 2014). The results reveal that fee discounts continue to exist in initial audit engagements, even in markets where audit fees are generally minimal for incumbent auditors. This is crucial for legislators and decision-makers concerned about the adverse effects of low audit fees. In such environments, initiatives by legislators (SEO) to stimulate supply and demand (such as ranking systems for audit firms and clients) have positively influenced the reduction of audit fee discounts in initial engagements, thereby addressing the issue of lowballing in the market.

The remainder of this paper is organized as follows. Section 2 provides a brief review of the Iranian audit market and the Audit Firm Ranking (AFR) system. Section 3 develops the theoretical background and research hypotheses. In Section 4, the sampling design and model specification are presented. Section 5 discusses the findings of the descriptive, univariate, and multivariate analyses, along with the results from various robustness tests. Finally, Section 6 concludes the paper with the conclusions and final remarks.

2. Institutional Background

2-1. Iranian Audit Market

Since the 1979 Islamic Revolution, the vast majority of domestic industries in Iran have been nationalized. Consequently, international audit firms have been barred from accessing the Iranian audit market, a restriction that remains in effect to this day. To address the need for auditing state-owned and semi-state-owned entities, three semi-state audit firms were initially established. However, due to the lack of comparability in audited financial statements, the Iranian Audit Organization (IAO) was founded in 1987 through the merger of these three entities (Mashayekhi & Mashayekh, 2008; Roudaki, 2008).

Following the conclusion of the Iran-Iraq War in 1988, privatization policies spurred a demand for private sector auditors. In response, the Iranian parliament enacted the Certified Public Accountants Act in 1993, authorizing private sector CPAs to provide assurance services to domestic entities. Subsequently, in 2001, the Iranian Association of Certified Public Accountants (IACPA) was established (Mashayekhi & Mashayekh, 2008; Roudaki, 2008).

Before the foundation of the IACPA, the IAO had unparalleled authority over the Iranian audit market. However, the enactment of the CPA Act facilitated the emergence of private audit firms, which have since captured a significant portion of the market. By 2024, a total of 250 audit firms were members of the IACPA, although only a quarter of these firms were recognized as Trusted Audit Firms (TAFs) by the Securities and Exchange Organization (SEO) and authorized to audit public issuers. In 2007, the SEO introduced legislation mandating the rotation of TAFs every four years, a policy that was implemented in 2012. Research indicates a trend toward adopting private auditors in the early years following market liberalization after the IACPA's establishment in 2001. During

1. The Financial Times Stock Exchange 100 Index
2. Our study differs from MohammadRezaei and Mohd-Saleh (2017) and MohammadRezaei et al. (2018) in two ways. First, MohammadRezaei and Mohd-Saleh (2017) examine lowballing after audit market liberalization (up to 2010) and in the case of switching from public to private audit firms. Second, MohammadRezaei et al. (2018) investigate the role of Top vs. Non-Top auditors on audit fees and quality though price discrimination views, and have not tested the role of AFR and different type of auditor switching following the ranking on initial audit fee discounts.

subsequent years, auditor switches were predominantly within the private sector. In 2013, the SEO set forth guidelines for ranking TAFs, aiming to enhance transparency and foster competitiveness. These guidelines are detailed in the next section (MohammadRezaei & Mohd-Saleh, 2017; MohammadRezaei et al., 2018)

The liberalization of the Iranian audit market increased competition within the private sector (Bagherpour et al., 2014; MohammadRezaei et al., 2016). Like other developing markets, Iran has faced challenges due to an inadequate demand and supply of high-quality audit services. Factors such as ownership concentration, minimal separation between ownership and management, insufficient protection laws for minority shareholders, and a credit insider system mean that majority shareholders, who wield significant influence, often lack strong incentives to seek high-quality audits. However, agency conflicts, particularly between majority and minority shareholders, have become more common (MohammadRezaei et al., 2015). As a result, auditing of listed companies has been required by various legislations, including the Securities Exchange Acts of 1968 and 2005 (Roudaki, 2008).

On the supply side, local audit firms tend to be small, typically employing around 30 staff members (Langli & Svanström, 2014), and face intense competition (Bagherpour et al., 2014; Hoshi, 2011; MohammadRezaei & Mohd-Saleh, 2018). Moreover, specialization among auditors is limited due to the scant demand for high-quality audits. With both engagement and review partners required to sign the audit report in Iran, regulatory authorities and the legal system hold these partners accountable for any shortcomings. This accountability motivates audit partners to maintain a standard of quality to mitigate potential penalties. Consequently, regulatory bodies like the SEO and the IACPA have been prompted to play a more active role in market oversight (MohammadRezaei et al., 2018).

2-2. Audit Firm Ranking

The Iranian Association of Certified Public Accountants (IACPA) and the Securities and Exchange Organization (SEO) have recently implemented several initiatives aimed at enhancing the supply and demand for quality auditing services. Notable among these are the AFR mandated by the IACPA in 2015, and the mandatory rotation of TAFs every four years, established by the SEO in 2007 and enacted in 2012. In addition, the SEO introduced ranking guidelines for TAFs and listed enterprises in 2013. The Audit Fee Regulation categorizes both TAFs and registered issuers into four distinct categories, based on various criteria. Key factors influencing higher rankings include the number of audit partners, the experience level of partners and employees, the presence of a robust managerial and corporate framework, a diverse range of services, a larger market share, and superior peer review scores from the IACPA (MohammadRezaei et al., 2018). Conversely, firms and partners with records of infractions are penalized with lower scores. Table 1 presents the scoring range and methodology used for categorizing audit firms.

Table 1. Scores for TAF Ranking (Source: MohammadRezaei et al., 2018)

Rank	Scores of each rank
First	Equal to or greater than 700 scores
Second	Equal to or greater than 600 scores and less than 700 scores
Third	Equal to or greater than 500 scores and less than 600 scores
Fourth	Less than 500 scores

The categorized list of TAFs is illustrated in Table 2. As of 2021, approximately 25% of the 250 audit firms that are members of the IACPA are recognized by the SEO as trusted auditors, meeting the necessary criteria to audit authorized issuers. It is essential to note that the decline in the number of TAFs is not solely due to firms withdrawing from the list; rather, it is largely linked to an increase in mergers since 2015.

As indicated in Table 3, the SEO further classifies its registered issuers according to a different set of criteria, which include market value, total assets, and sales figures.

The SEO mandates that issuers select their auditors based on their rankings to ensure a balance between certified auditors and registered issuers. An example of the auditor selection process utilized by companies is depicted in Figure 1. For instance, a “second-class” company may only select an auditor of the same class or higher (i.e., a first-class auditor). Consequently, clients are not permitted to engage TAFs from a lower classification. This policy results in the SEO delegating the audit

responsibilities of large, listed enterprises to larger or higher-class auditors. The underlying assumption is that high-class audit firms maintain higher standards of audit quality compared to their lower-class counterparts.

However, research by MohammadRezaei et al. (2018) suggests that top-tier firms (first-class) do not necessarily perform better than non-top firms, despite charging premium fees. This raises questions about the efficacy of the current ranking system and its implications for audit quality. The ranking of TAFs and issuers, along with the selection and switching of auditors, has resulted in various types of auditor transitions, including switches between top and non-top firms. This study aims to explore how the Audit Firm Regulation and the switching between audit classes—each with potentially different bargaining powers—impact audit fee discounts under these circumstances.

Table 2. TAF Ranking

Year	First-ranked	Second-ranked	Third-ranked	Fourth-ranked	Total number
2012	18	35	34	22	109
2013	16	38	41	15	112
2014	20	35	31	26	108
2015	26	29	36	4	95
2016	26	27	18	9	80
2017	26	15	21	13	75
2018	26	15	20	12	73
2019	26	13	13	17	69
2020	26	11	13	12	62

Table 3. Categorization Criteria of Listed Companies on the TSE[1]

	Criteria for each category	
Category	Mean of assets and sales (Million$)	Market value (Million$)
First	with 267 or more	with 534 or more
Second	with 107 to 267	with 214 to 534
Third	with 27 to 107	with 53 to 214
Fourth	Less than 27	Less than 53

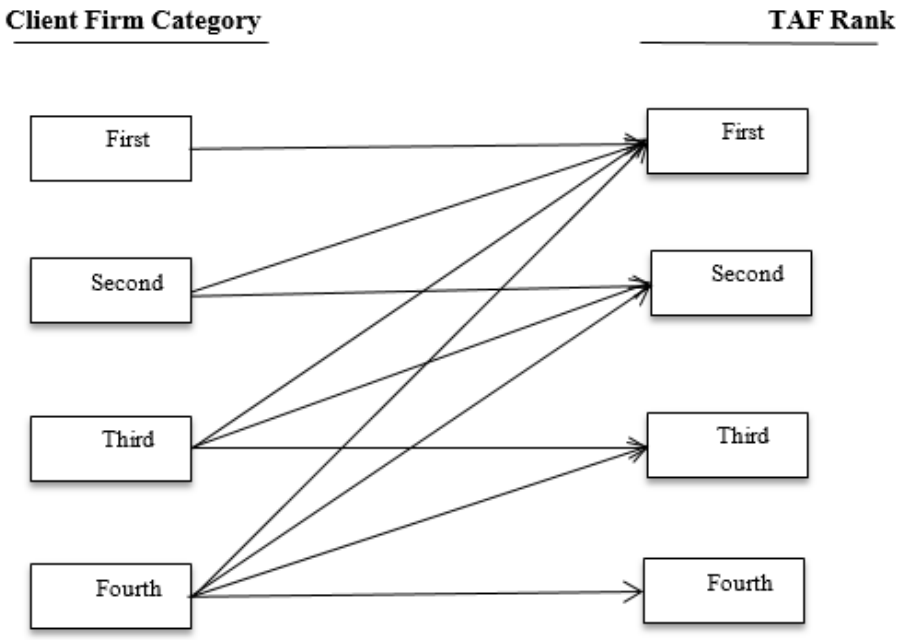

Fig. 1. Process of Auditor Selection by SEO's Registered Issuers (Source: MohammadRezaei et al., 2018)

1. It should be noted that these categories are based on the new classification published by SEO in 2020.

3. Literature Review and Hypothesis Development

3-1. Theoretical Background

Lowballing refers to the practice of setting audit fees below the total current costs for initial audit engagements, primarily as a strategy to attract clients. DeAngelo (1981) posits that the motivation behind lowballing lies in the anticipation of generating future client-specific quasi-rents. Numerous studies examining initial fee discounts associate them with auditors' lowballing strategies and the expectation of quasi-rents (e.g., Cho et al., 2021; Desir et al., 2014; Liu & Huang, 2024). For instance, Cho et al. (2021) argue that auditors who engage in lowballing tend to recover initial losses by increasing audit fees more rapidly in subsequent years.

However, Dye (1991) challenges DeAngelo's implicit assumption that the incumbent auditor—the auditor in the years following the initial engagement—will exclusively capture all quasi-rents derived from initial cost reductions. Unlike DeAngelo, Dye does not assume that the auditor holds the majority of bargaining power in the auditor-client relationship. Empirical evidence indicates that the practice of lowballing in initial engagements is not uniform across all auditors and varies based on their bargaining power (Cho et al., 2021; Clark et al., 2022; Ghosh & Lustgarten, 2006; Huang et al., 2009). Factors influencing differences in auditors' bargaining power include differentiation strategies (e.g., Huang et al., 2009) and market concentration (e.g., Eshleman & Lawson, 2017).

Given the unique characteristics of the Iranian audit market, alongside the existing empirical evidence, we argue that the bargaining power perspective serves as a more fitting theoretical framework for elucidating audit fee discounts in initial engagements within Iran. Notably, despite the absence of the Big 4 auditing firms in Iran, the SEO's ranking system allows some auditors (designated as Top) to differentiate themselves from others (non-Top) and command higher fees from clients, even without necessarily delivering superior quality services (MohammadRezaei et al., 2018). This framework thus effectively accounts for potential discrepancies in initial audit fee discounts between Top and non-Top auditors. Moreover, the current state of the Iranian audit market renders the foundational assumption of the lowballing theory—namely, the recovery of initial losses in subsequent years—largely untenable. This is particularly relevant in light of the mandatory four-year auditor rotation imposed on Tehran Stock Exchange (TSE)-listed firms since 2012. In this context, auditors do not possess a sufficiently extended timeframe to recoup expected future quasi-rents. Consequently, the lowballing theory, which hinges on anticipated future quasi-rents, offers limited explanatory power in the Iranian context.

In their study, MohammadRezaei and Mohd-Saleh (2017) utilized the bargaining power perspective to analyze variations in initial fee discounts in Iran during the early years of transitioning from state to private auditors amidst the liberalization of the Iranian audit market. Their findings indicated that Iranian auditors do indeed offer discounts for initial audit engagements, and the extent of these discounts varies among different auditors. In the present study, we extend this inquiry by examining a new form of auditor switching that occurred after the period covered by MohammadRezaei and Mohd-Saleh (2017). This allows us to gather fresh evidence supporting the bargaining power perspective in the context of the Iranian audit market. Fee discounts for initial audit engagements and the various forms of auditor switching are depicted in Figure 2.

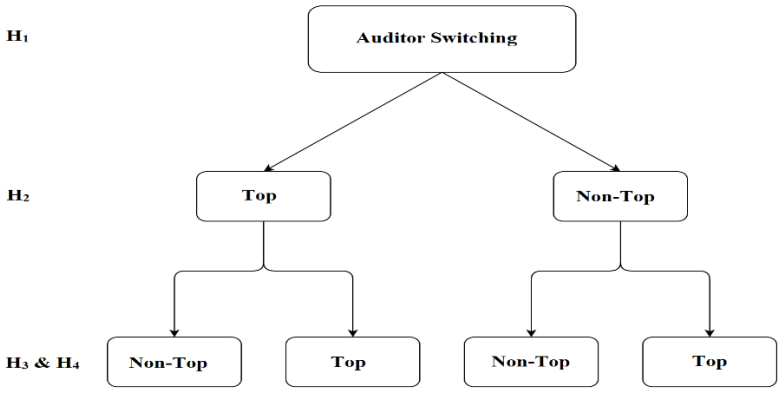

Fig. 2. Different Forms of Auditor Switching Following the Ranking of Iranian Audit Firms

3-2. Regulation and Fee Discounts

The practice of fee discounting in initial audit engagements has garnered the attention of researchers for over four decades (e.g., Omer & Yuan, 2024; Simon & Francis, 1988). Recently, Eierle et al. (2022) have emphasized the significance of understanding the role of regulation in audit pricing. However, there is limited empirical evidence regarding the impact of regulation on fee discounting during initial audit engagements, and most of this evidence originates from the U.S. context. For example, Huang et al. (2009) observed that the initial audit fee discount for A 4 firms changed from 24% in 2001 (pre-Sarbanes-Oxley Act) to a 16% audit fee premium in the initial year post-SOX. In contrast, Desir et al. (2014) found that both Big 4 and non-Big 4 firms continued to offer initial fee discounts in the extended post-SOX period. Furthermore, Ferguson et al. (2019) provided evidence from Australia, showing that audit fees increase in the year of the audit partner's mandatory rotation.

The AFR implemented by the Securities and Exchange Organization (SEO) in Iran in 2013 could potentially influence fee discounts in initial engagements. The AFR aligns high-bargaining-power clients (large clients) with high-bargaining-power auditors (large auditors). Panel D of Table 4 indicates that in the year of AFR implementation, the number of auditor changes was not significant due to mismatched auditor and client classes. Therefore, the number of top clients, as defined by AFR in the Iranian capital market, is quite limited, and most of these clients—being state and semi-state firms—are audited by the Iranian Audit Organization (IAO) (Bagherpour et al., 2014). Therefore, the premise that there was an earlier mismatch where non-top auditors audited large clients is not valid.

AFR is likely to reduce audit fee discounts through two main channels: first, the number and market share of high-bargaining-power auditors (Top auditors) have increased since the introduction of AFR; second, post-AFR, the auditor class must be equal to or higher than the client class. Subsequent to AFR, which conferred certain auditors with the Top brand label, these auditors have enhanced their bargaining power due to this branding. Moreover, AFR has gradually expanded the market share of Top audit firms, and the number of these firms has increased due to factors such as mergers. Conversely, the number of non-Top audit firms has gradually decreased (MohammadRezaei et al., 2018). This development implies that post-AFR, more than 50% of clients are audited by approximately 25 Top audit firms. In this scenario, as the market share of Top audit firms escalates, most clients interface with auditors possessing higher bargaining power. On the other hand, with the reduction in the number of non-Top audit firms and their market share, the overall impact of AFR on fee discounting is expected to diminish.

In addition, post-AFR, auditors of each class can only audit clients of the same or lower class. For instance, a non-Top third-class auditor can only audit third- or fourth-class clients (the smallest clients). Therefore, post-AFR, the auditor class is equal to or higher than the client class. Accordingly, when there is parity between the bargaining power of the auditor and the client, clients are less likely to receive significant audit fee discounts. Based on this rationale, the first hypothesis is stated as follows:

> **H1:** Audit fee discounts for initial engagements are smaller in the post-AFR period compared to the pre-AFR period.

3-3. Switching to Top and Non-Top Auditors and Fee Discounts

Prior research has indicated that certain auditors may possess relatively higher bargaining power over their clients due to various factors, including their differentiation strategies—such as auditor size or industry specialization—and their market power resulting from a concentrated audit market (Eshleman & Lawson, 2017; Ghosh & Lustgarten, 2006; Gunn et al., 2019; Huang et al., 2009). For instance, evidence from Huang et al. (2009) suggests that the Big 4 firms charged a premium for new clients in 2006. Ghosh and Lustgarten (2006) further documented that clients switching auditors in competitive sectors received a 24% fee discount, whereas those in oligopolistic sectors experienced only a 4% discount. Conversely, studies by Craswell and Francis (1991), Gregory and Collier (1996), and Omer and Yuan (2024) have shown that fee discounts are more pronounced when clients switch to Big N auditors.

In the Iranian context, Top auditors are likely to wield greater bargaining power compared to non-Top auditors for several reasons. These include their reputation for quality and a higher market share,

which may contribute to disparities in initial audit fee discounts between these two groups. MohammadRezaei et al. (2018) demonstrated that Top auditors in Iran charge higher audit fees than their non-Top counterparts. This phenomenon can be attributed to the reputation-based price discrimination strategy employed by Top auditors, influenced by the rankings established by the SEO. Such a strategy suggests that Top auditors possess greater bargaining power, which in turn likely results in lower initial audit fee discounts.

Moreover, regarding the market share dynamics of Iranian auditors, MohammadRezaei et al. (2018) noted that 21% of audit firms (predominantly Top auditors) in 2010 accounted for approximately 57% of the total revenue generated by private audit firms. Eshleman and Lawson (2017) and Ghosh and Lustgarten (2006) posited that a higher market share correlates with increased bargaining power in negotiations for fee discounts during initial engagements. Consequently, it can be anticipated that Top auditors will provide lower initial audit fee discounts relative to non-Top auditors, due to their superior bargaining position. Based on this analysis, we propose the following hypothesis:

> **H2:** Initial audit fee discounts are greater when switching to non-Top auditors compared to Top auditors.

3-4. Switching within the Same Class and Fee Discounts

Ghosh and Lustgarten (2006) report that the audit fee discount is 10.4% when switching between Big N auditors, compared to a 13.9% discount when switching between non-Big N auditors. They attribute the lower fee discount for large clients—who prefer to be audited by the Big 4—to non-price competition, manifesting in the form of higher-quality audits. This indicates that the Big 4 perceive their relative bargaining power as substantial, knowing that significant clients are hesitant to transition to non-Big N firms due to concerns about audit quality, leading them to offer lower discounts during initial engagements. Similarly, Cho et al. (2021) demonstrate a significant positive relationship between client importance and lowballing (defined as an audit fee discount of 30% or higher) occurring solely when switching from one non-Big N auditor to another, but not when switching between Big N auditors.

Building on the findings of Ghosh and Lustgarten (2006) and Cho et al. (2021), this study also investigates the effects of switching between Top auditors and between non-Top auditors. Our hypothesis posits that audit fee discounts are higher when transitioning from one non-Top auditor to another compared to when switching from one Top auditor to another, aligning with the observations made by Ghosh and Lustgarten (2006). The rationale for this hypothesis is underpinned by both theoretical and empirical evidence supporting the second hypothesis. In these scenarios, the client remains unchanged (thereby allowing us to disregard the client's bargaining power), while the auditor's bargaining power is expected to remain constant, as one auditor of the same classification replaces another.

Consistent with the second hypothesis, it follows that Top auditors inherently possess greater bargaining power than their non-Top counterparts, resulting in lower discounts offered for initial audit engagements. Hence, we formulate the third hypothesis as follows:

> **H3:** Initial audit fee discounts are higher when switching between non-Top auditors compared to switching between Top auditors.

3-5. Switching to a Different Class and Fee Discounts

Peel (2013) found that the initial audit fee discount is 15% when switching from Big 4 to Mid 4 auditors for public companies and 21% for quoted companies. However, when switching from Mid 4 to Big 4, no significant differences were observed in the initial fee discount. These findings suggest that, in the first scenario (Big 4 to Mid 4), an auditor with lower bargaining power replaces one with higher bargaining power, leading to an initial fee discount. Conversely, in the second scenario (Mid 4 to Big 4), an auditor with higher bargaining power replaces one with lower bargaining power, resulting in no fee reduction. Similarly, MohammadRezaei and Mohd-Saleh (2017) demonstrate that the initial audit fee discount in Iran is 19% when switching from state auditors (IAO) to private auditors, compared to a 13% discount when switching from one private auditor to another. This suggests that when audit engagements transfer from public to private auditors, the shift occurs from a

party with higher bargaining power (due to the monopolistic audit market for state and semi-state-owned companies in Iran) to one with lower bargaining power (auditors operating in a competitive market). This transition may lead to a greater reduction in the initial audit fee compared to situations where the successor and predecessor auditors have comparable bargaining power.

The evidence provided by Peel (2013) and MohammadRezaei and Mohd-Saleh (2017) suggests that the initial audit fee discount varies when switching from Top to non-Top auditors compared to switching from non-Top to Top auditors. Based on the rationale for the second hypothesis, Top auditors possess higher bargaining power over clients compared to non-Top auditors. As such, when switching from Top to non-Top auditors (or vice versa), an auditor with lower (higher) bargaining power takes over from one with higher (lower) bargaining power. Consequently, it can be anticipated that the initial audit fee discount will be more significant in the first scenario, leading to the formulation of the fourth hypothesis:

> **H4:** Initial audit fee discounts are higher when switching from Top to non-Top auditors than when switching from non-Top to Top auditors.

4. Research Design

4-1. Data Collection

Table 4 details the sample selection process and the industry distribution of the study. Panels A, B, and C in Table 4 illustrate the sample selection process. This study encompasses the period from 2006 to 2019, with data supporting our hypotheses manually collected from the audited annual reports of companies listed on the Tehran Stock Exchange (TSE). The annual audited financial statements were sourced from the Comprehensive Issuer Information System (CODAL). The total number of available observations for listed companies is 4,566 firm-years. Given that more than half of the client firms do not separately disclose audit fees in the financial statement notes (MohammadRezaei & Mohd-Saleh, 2017), 2,365 non-disclosed observations were excluded from the study. Following the approach of MohammadRezaei et al. (2018), a total of 459 observations from firms audited by the Iranian Audit Organization (IAO), the state auditor, were excluded due to the differing processes used to determine audit fees and the monopoly of the IAO in auditing state- and semi-state-owned firms. Moreover, since IAO is exempt from mandatory auditor switching, it retains clients in long term, making auditor switching irrelevant for this auditor. An additional 182 firm-years from the listed firms were excluded. Furthermore, 345 observations related to financial companies, such as banks, insurance, investment, and holding companies, were removed due to significant differences in their operations compared to other firms. Ultimately, 1,215 firm-year observations remain as the research sample. The data screening process is presented in Panels A, B, and C of Table 4.

The study period is divided into two phases: pre- and post-implementation of the AFR regulation. To examine the first hypothesis concerning the impact of AFR regulation on audit fee discounts in initial engagements, the time frame from 2006 to 2019 was used, as depicted in Panel A of Table 4. For the remaining hypotheses (H2, H3, and H4), the research period spans from 2013 to 2019, which is the post-AFR period, consisting of 702 firm-year observations, as shown in Panel C of Table 4.

Panel D of Table 4 presents data on auditor switches between different classes of auditors and distinguishes between voluntary and mandatory switches during the research period. Consistent with Bagherpour et al. (2014), the statistics in Panel D indicate an increase in auditor switching following the liberalization of the Iranian audit market in 2001. The increases observed in 2012 and 2016 are attributable to mandatory auditor switching requirements every four years, first introduced by the SEO in 2012. Panel E of Table 4 provides the distribution of sample firms by industry type.

Table 4. Sample Selection Process and Industry Distribution

Panel A: Sample selection process (All period: 2006-2019)	**Total sample**
Initial observations for the period following audit market liberalization and pre- and post-AFR (2006 to 2019)	4566
Less: observations with no voluntary disclosure of audit fees	2365
Sub total	2201
Less: observations that the auditor is IAO	459
Sub total	1742
Less: observations that have withdrawn from the Stock Exchange	182
Less: financial institutions (Such as banks, holdings, insurance companies etc.)	345
Number of observations in final analysis of audit fees discounting	1215
Panel B: Sample selection process, pre-AFR (2006-2012)	**Total sample**
Initial observations for the period following audit market liberalization and pre-AFR (2006 to 2012)	2302
Less: observations with no voluntary disclosure of audit fees	1259
Sub total	1043
Less: observations that the auditor is IAO	260
Sub total	783
Less: observations that have withdrawn from the Stock Exchange	95
Less: financial institutions (Such as banks, holdings, insurance companies, etc.)	175
Number of observations in final analysis of audit fees discounting	513
Panel C: Sample selection process, post-AFR (2013-2019)	**Total sample**
Initial observations for the period following audit market liberalization and AFR (2013 to 2019)	2264
Less: observations with no voluntary disclosure of audit fees	1106
Sub total	1158
Less: observations that the auditor is IAO	199
Sub total	959
Less: observations that have withdrawn from the Stock Exchange	87
Less: financial institutions (Such as banks, holdings, insurance companies etc.)	170
Number of observations in final analysis of audit fees discounting	702

Panel D: Auditor switches

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
SwitchT	0	0	0	0	0	0	0	7	18	24	35	8	16	3	111
SwitchN	0	0	0	0	0	0	0	22	11	14	17	8	7	0	79
SwitchTT	0	0	0	0	0	0	0	4	8	17	20	5	13	1	68
SwitchNN	0	0	0	0	0	0	0	14	4	8	11	8	2	0	47
SwitchNT	0	0	0	0	0	0	0	3	10	7	15	3	3	2	43
SwitchTN	0	0	0	0	0	0	0	8	7	6	6	0	5	0	32
Voluntary switch	0	4	8	19	11	21	30	12	22	27	24	8	15	1	202
Mandatory switch	0	0	0	0	0	0	32	17	7	11	28	8	8	2	113
Total switch	0	4	8	19	11	21	62	29	29	38	52	16	23	3	315

Panel E: Industry distribution

SEO industry classification	**Number of firms**	**Number of observations**	**% Distribution**
Automobile	24	155	0.12
Pharmacology	17	110	0.095
Cement	15	140	0.115
Oil	18	122	0.104
Food	21	158	0.13
Mine	19	162	0.133
Industrial	18	153	0.125
Other	28	215	0.177
Total	160	1215	100%

4-2. Model Specifications

4-2-1. Models and Variables for the First Hypothesis

Two distinct model specifications were employed in the literature to examine the impact of auditor switching on audit fees. The first is the cross-sectional audit fee regression model, often referred to as the fee-level specification, as demonstrated by Simon and Francis (1988), Craswell and Francis (1999), and Cho et al. (2021). The second specification is the first difference model, utilized by various researchers, including Ghosh and Lustgarten (2006) and Cho et al. (2021). Given the context of high inflation in Iran (Faraji et al., 2020) and the limited number of cross-sectional observations (fewer than 100 companies annually) (MohammadRezaei & Mohd-Saleh, 2017), coupled with the

methodological advantages of first difference models over cross-sectional models (Ghosh & Lustgarten, 2006), this study adopts first difference specifications.

Prior research employing first difference models has incorporated dummy variables for both year and industry (e.g., Ghosh & Lustgarten, 2006) as well as level variables, such as the presence of Big 4 auditors (e.g., Zhang & Shailer, 2021). In alignment with these prior studies (e.g., Ghosh & Lustgarten, 2006; Zhang & Shailer, 2021), we expand our first difference models (Models 1-3) to test specific hypotheses. We aim to investigate whether the changes in audit fees differ between firms that switch auditors and those that do not, post- AFR. The model (1) is articulated as follows:

$$\begin{aligned}\Delta AudFee_{it} = {} & \beta_0 + \beta_1 Switch_{it} + \beta_2 AFR_{it} + \beta_3 AFR \times Switch_{it} + \beta_4 UQual\text{-}to\text{-}Qual_{it} \\ & + \beta_5 Qual\text{-}to\text{-}UQual_{it} + \beta_6 \Delta Assets_{it} + \beta_7 \Delta Lev_{it} + \beta_8 \Delta InvRec_{it} + \beta_9 \Delta Liq_{it} \\ & + \beta_{10} \Delta ROA_{it} + \beta_{11} Loss\text{-}to\text{-}Nloss_{it} + \beta_{12} Nloss\text{-}to\text{-}Loss_{it} + \beta_{13} Nsub\text{-}to\text{-}Sub_{it} \\ & + \beta_{14} Sub\text{-}to\text{-}Nsub_{it} + \beta_{15} NstOwn_{it} + \beta_{16} AudTop_{it} + \sum \beta_j IndustryDum + \beta_k YearDum + \varepsilon_{it}\end{aligned} \quad (1)$$

In Model (1), the dependent variable $\Delta AudFee$ represents the percentage change in audit fees from the previous year to the current year (MohammadRezaei & Mohd-Saleh, 2017). This variable is adjusted for inflation to account for the significant inflation rate in Iran, which impacts audit fees (Faraji et al., 2020). The variable Switch denotes auditor switching, with a value of 1 if the client has changed auditors (treatment group), and 0 otherwise (Bagherpour et al., 2014). We hypothesize that the coefficient β_1 will be negative. AFR is a dummy variable that equals 1 for the years 2013 to 2019 (following the implementation of the Audit Fee Regulation) and 0 for earlier years (2006 to 2012). To assess the impact of AFR on audit fees during initial engagements, we employ the interaction term AFR × Switch. We expect the coefficient β_3 to be positive.

Clients with auditor switching are matched with those without such switching using the "nearest neighbor matching" technique without replacement. We then apply Model (1) to the matched sample. Despite including various firm characteristics as control variables, Propensity Score Matching (PSM) [1] is utilized because discrepancies might still exist between the characteristics of switched and non-switched firms due to functional form misspecification[2].

Since auditors need to spend more time at the client company to verify receivables, review inventories, and issue qualified audit reports, percentage changes in receivables and inventories ($\Delta InvRec$) and changes in audit opinions ($Qual\text{-}to\text{-}Uqual$ and $Uqual\text{-}to\text{-}Qual$) are added to the model as control variables (Ghosh & Lustgarten, 2006). Auditors are also likely to demand higher audit fees from more sophisticated clients. Therefore, percentage changes in total assets ($\Delta Assets$) and changes in client-owned subsidiaries ($Sub\text{-}to\text{-}Nsub$ and $NSub\text{-}to\text{-}Sub$) are included to control for the client's sophistication. The potential impact of changes in the client's risk is controlled using percentage changes in leverage (ΔLev), liquidity (ΔLiq), return on assets (ΔROA), and changes in losses ($Loss\text{-}to\text{-}Nloss$ and $NLoss\text{-}to\text{-}Loss$), since auditors are more likely to demand higher fees from risky clients (Ghosh & Lustgarten, 2006). Non-state ownership ($NstOwn$) is also included to control for its impact on incentives for earnings management and thereby on audit fees (MohammadRezaei et al., 2018). First-ranked TAF by the SEO ($AudTop$) is captured since the

1. The selection model for PSM method is as follows:

$$\begin{aligned}Switch_{it} = {} & \lambda + y_1 Stown_{it-1} + y_2 AudTop_{it-1} + y_3 Size_{it-1} + y_4 Lev_{it-1} + y_5 InvRec_{it-1} + y_6 Liq_{it-1} + y_7 Sub_{it-1} + y_8 Issue_{it-1} \\ & + y_9 \Delta Management_{it-1} + y_{10} LogAge_{it-1} + \sum \beta_j IndustryDum\end{aligned}$$

All variables are defined in Appendix.

2. We attempted to use difference-in-difference (DiD) analysis to assess the influence of the AFR as an exogenous shock. The AFR applies to both private TAFs and the state auditor (IAO), meaning there is no straightforward control and treatment group defined by AFR. If we hypothesize that the AFR impacts private TAFs more significantly than the IAO, designating private TAFs as the treatment group and the IAO as the control group, several substantial issues persist. The primary issue is that the IAO is exempt from the mandatory auditor rotation every four years. Our dataset, which includes approximately 450 firm-year observations, shows no auditor switching for the IAO. This lack of variation in the Switch variable within the control group makes it impossible to test the interaction between Switch and AFR. Furthermore, the IAO operates within a monopolistic segment of the Iranian audit market, primarily auditing state- and semi-state-owned entities. Consequently, audit pricing parameters, as well as demand and supply dynamics, are likely to differ significantly between the monopolistic environment of the IAO and the intensely competitive market of private TAFs. Therefore, the IAO is not an appropriate control group to satisfy the parallel trends assumption, which is a fundamental requirement for DiD analysis.

evidence provided by MohammadRezaei *et al.* (2018) reveals that these auditors charge higher audit fees.

Following MohammadRezaei et al. (2018) and Faraji et al. (2023), the effects of specific variables, such as Big 4, non-audit fees, foreign investors, and board independence, are not controlled in the present study due to the special financial reporting and auditing system in Iran. As noted earlier, international audit firms have been prohibited from operating in Iran since the 1979 Revolution. In addition, the level of foreign investment in Iran has decreased significantly since the Revolution, and the disclosure of information about board independence is not yet mandatory.

4-2-2. Model and Variables for the Second Hypothesis

Model (2) is used to test the second hypothesis. It examines the impact of switching to a Top or a Non-Top auditor on audit fees.

$$\begin{aligned} AudFee_{it} = {} & \beta_0 + \beta_1 SwitchT_{it} + \beta_2 SwitchN_{it} + \beta_3 Uqual\text{-}to\text{-}Qual_{it} + \beta_4 Qual\text{-}to\text{-}Uqual_{it} \\ & + \beta_5\ \Delta Assets_{it} + \beta_6 \Delta Lev_{it} + \beta_7 \Delta InvRec_{it} + \beta_8 \Delta Liq_{it} + \beta_9 \Delta ROA_{it} + \beta_{10} Loss\text{-}to\text{-}Nloss_{it} \\ & + \beta_{11} Nloss\text{-}to\text{-}Loss_{it} + \beta_{12} Nsub\text{-}to\text{-}Sub_{it} + \beta_{13} Sub - to - Nsub_{it} + \beta_{14} NstOwn_{it} \\ & + \beta_{15} AudTop_{it} + \sum \beta_j IndustryDum + \beta_k YearDum + \varepsilon_{it} \end{aligned} \quad (2)$$

In 2013, the Securities and Exchange Organization (SEO) enforced guidelines for ranking Trustee Audit Firms (TAFs) into four classes. In Model (2), the main independent variables are defined as follows: SwitchT denotes switching to a first-class (Top) auditor, which can occur either within the same class or from another class to the first class. SwitchN represents switching to a non-Top auditor, which may involve a transition between non-Top auditors or from a Top auditor to a non-Top auditor. We expect that audit fee discounts will be greater when switching to a non-Top auditor compared to switching to a Top auditor. Other control variables remain consistent with those in Model (1).

4-2-3. Model and Variables for the Third and Fourth Hypotheses

Model (3) is used to test hypotheses 3 and 4. This model examines the impact of various forms of switching between and within Top and non-Top classes.

$$\begin{aligned} \Delta AudFee_{it} = {} & \beta_0 + \beta_1 SwitchTT_{it} + \beta_2 SwitchNN_{it} + \beta_3 SwitchNT_{it} + \beta_4 SwitchTN_{it} + \beta_5 Uqual\text{-}to\text{-}Qual_{it} \\ & + \beta_6 Qual\text{-}to\text{-}Uqual_{it} + \beta_7\ \Delta Assets_{it} + \beta_8 \Delta Lev_{it} + \beta_9 \Delta InvRec_{it} + \beta_{10} \Delta Liq_{it} + \beta_{11} \Delta ROA_{it} \\ & + \beta_{12} Loss\text{-}to\text{-}Nloss_{it} + \beta_{13} Nloss\text{-}to\text{-}Loss_{it} + \beta_{14} Nsub\text{-}to\text{-}Sub_{it} + \beta_{15} Sub\text{-}to\text{-}Nsub_{it} \\ & + \beta_{16} NstOwn_{it} + \beta_{17} AudTop_{it} + \sum \beta_j IndustryDum + \beta_k YearDum + \varepsilon_{it} \end{aligned} \quad (3)$$

The main independent variables in Model (3) represent switching between different classes of auditors: SwitchTT equals one if there is a switch from one Top auditor to another, and zero otherwise; SwitchNN equals one if there is a switch from one non-Top auditor to another, and zero otherwise; SwitchNT equals one if there is a switch from a non-Top auditor to a Top auditor, and zero otherwise; and SwitchTN equals one if there is a switch from a Top auditor to a non-Top auditor, and zero otherwise. The rationale for including other control variables was discussed earlier. Definitions of the research variables are provided in the appendix.

5. Results

5-1. Descriptive Statistics and Univariate Analysis

The descriptive statistics are presented in Panels A, B, C, D, E, and F of Table 5. Panels A, C, and E provide descriptive statistics for the entire sample, encompassing 1,215 firm-year observations. In contrast, Panels B, D, and F offer descriptive statistics for the subsample following the implementation of the AFR, consisting of 702 firm-year observations. To mitigate the influence of outliers, all continuous variables have been winsorized at the 1% and 99% levels.

Panel A in Table 5 displays the descriptive statistics for continuous variables, revealing that the mean percentage change in audit fees ($\Delta\ AudFees$) among the sample companies is 18%. Audit firms generally perceive that the inflation rate reported by the Central Bank of Iran underrepresents the true inflation rate, leading them to significantly increase their fees each year, typically between 20% and 25%. Similarly, MohammadRezaei and Mohd-Saleh (2017) documented an average change of 29% in audit fees.

Panel D of Table 5 presents the descriptive statistics for dichotomous variables. Our sample includes a total of 315 auditor switches: 68 switches are from Top auditors to other Top auditors, 47 from non-Top to non-Top, 43 from non-Top to Top auditors, and 32 from Top to non-Top auditors. In aggregate, there are 111 switches to Top auditors and 79 switches to non-Top auditors. Moreover, these 315 switches comprise 202 voluntary and 113 mandatory auditor switches.

Panel E of Table 5 reports the outcomes of bivariate tests for both continuous and dichotomous variables. The findings indicate that audit fee increases are lower in observations with auditor switching compared to those without, aligning with MohammadRezaei and Mohd-Saleh (2017) and supporting the first hypothesis, which posits that audit fee discounts occur in initial audit engagements when auditors possess less bargaining power relative to clients. Changes in inventories and receivables ($\Delta\ InvRec$) are smaller in observations with an auditor switch. Additionally, the change in audit opinion from unqualified to qualified ($Uqual\text{-}to\text{-}Qual$) is notably different between samples with and without an auditor switch.

Table 5. Descriptive Statistics for Audit Fees Changes Regressions Model

Panel A: Continuous variables for whole period (2006-2019)

Variables	Mean	Median	SD	Maximum	Minimum
Δ Audfees	0.1836	0.1400	0.3608	1.6600	-0.6200
Δ Assets	0.1669	0.1100	0.2868	1.4400	-0.3300
Δ Lev	0.0348	0.0200	0.2550	1.1200	-0.5600
Δ InvRec	0.0680	0.0200	0.3699	2.2100	-0.6500
Δ Liq	0.0660	-0.0100	0.4824	2.9900	-0.7500
Δ ROA	0.0389	-0.1100	4.5497	24.8400	-24.4600

Panel B: Continuous variables for post-AFR (2013-2019)

Variables	Mean	Median	SD	Maximum	Minimum
Δ Audfees	0.2102	0.1600	0.4201	2.6300	-0.6400
Δ Assets	0.1928	0.1300	0.3188	1.7600	-0.2800
Δ Lev	0.0371	0.0100	0.2874	1.3500	-0.5600
Δ InvRec	0.0897	0.0300	0.4088	2.2900	-0.6600
Δ Liq	0.0472	-0.0200	0.4474	2.6600	-0.7800
Δ ROA	0.3784	-0.1100	5.0724	33.7800	-15.0200

Panel C: Dichotomous variables for whole period (2006-2019)

Variables	N=1215		Frequency (%)	
	0	1	0	1
Switch	900	315	74.07	25.93
AFR	513	702	42.22	57.78
AFR×Switch	1,025	190	84.36	15.64
UQual-to-Qual	1,129	86	92.92	7.08
Qual-to-UQual	1,127	88	92.76	7.24
Loss-to-NLoss	1,147	68	94.40	5.60
NLoss-to-Loss	1,124	91	92.51	7.49
NSub-to-Sub	1,195	20	98.35	1.65
Sub-to-NSub	1,204	11	99.09	0.91
NStown	730	485	60.08	39.92

Panel D: Dichotomous variables for post-AFR (2013-2019)

Variables	N=702		Frequency (%)	
	0	1	0	1
Switch	512	190	72.93	27.07
SwitchT	591	111	84.19	15.81
SwitchN	623	79	88.75	11.25
SwitchTT	634	68	90.31	9.69
SwitchNN	655	47	93.30	6.70
SwitchNT	659	43	93.87	6.13
SwitchTN	670	32	95.44	4.56
UQual-to-Qual	650	52	92.59	7.41
Qual-to-UQual	646	56	92.02	7.98
Loss-to-NLoss	663	39	94.44	5.56
NLoss-to-Loss	653	49	93.02	6.98
NSub-to-Sub	693	9	98.72	1.28
Sub-to-NSub	695	7	99.00	1.00
NStown	427	275	60.83	39.17
AudTop	315	387	44.87	55.13

Panel E: Bivariate test of differences for whole period (2006-2019)

Continuous variables -(T-Test)				Dichotomous variables-(Chi-Square Test)			
Variables	**Observations with auditor switch (n=315)**	**Observations with no auditor switch (n=900)**	**t-value**	**Variables**	**Observations with auditor switch (n=315)**	**Observations with no auditor switch (n=900)**	**chi-square**
				AFR	190	512	1.124
Δ Audfees	0.043	0.232	8.228***	UQual-to-Qual	29	57	2.928*
Δ Assets	0.166	0.166	0.010	Qual-to-UQual	24	64	0.089
Δ Lev	0.029	0.036	0.408	Loss-to-NLoss	16	52	0.215
Δ InvRec	0.031	0.080	2.054**	NLoss-to-Loss	21	70	0.415
Δ Liq	0.066	0.065	-0.010	NSub-to-Sub	7	13	0.871
Δ ROA	0.038	0.039	0.003	Sub-to-NSub	3	8	0.010
				NStown	123	362	0.134
				AudTop	182	542	0.579

Panel F: Bivariate test of differences for post-AFR (2013-2019)

Continuous variables -(T-Test)				Dichotomous variables-(Chi-Square Test)			
Variables	**Observations with auditor switch (n=190)**	**Observations with no auditor switch (n=512)**	**t-value**	**Variables**	**Observations with auditor switch (n=190)**	**Observations with no auditor switch (n=512)**	**chi-square**
Δ Audfees	0.112	0.246	3.776***	UQual-to-Qual	15	37	0.090
Δ Assets	0.160	0.204	1.623	Qual-to-UQual	15	41	0.002
Δ Lev	0.027	0.040	0.566	Loss-to-NLoss	12	27	0.287
Δ InvRec	0.036	0.109	2.087**	NLoss-to-Loss	13	36	0.007
Δ Liq	0.056	0.043	-0.338	NSub-to-Sub	5	4	3.748***
Δ ROA	0.206	0.442	0.547	Sub-to-NSub	2	5	0.0081
				NStown	75	200	0.009
				AudTop	111	276	1.141

Note: **, ***Significance at 0.05 and 0.01 levels, respectively

The untabulated results show that the correlation between variables is no higher than -0.459 (particularly between ΔLev and ΔLiq). Furthermore, the highest variance inflation factor (VIF) for the independent variables across all models is 2.91, which is below the threshold of 10, indicating that multicollinearity is not a significant concern (Gujarati, 1995).

5-2. Multivariate Analysis

5-2-1. Examining the First Hypothesis

Table 6 presents the estimation results for Model (1), utilizing ordinary least squares (OLS) with robust standard errors clustered by firm, derived from both unmatched and matched samples using the propensity score matching (PSM) method. The standard errors have been adjusted for heteroskedasticity and autocorrelation, following Petersen (2009). The analysis of the matched sample indicates that auditor switching is negatively associated with changes in audit fees (ΔAudFee) prior to the implementation of the AFR. Specifically, auditor switching is associated with an approximate 30% discount on audit fees in Iran post-AFR, a finding that corroborates previous studies (e.g., Cho et al., 2021; Ghosh & Lustgarten, 2006; MohammadRezaei & Mohd-Saleh, 2017). This suggests that, despite the generally low audit fees in Iran, auditors are inclined to offer discounts for initial engagements to attract clients.

The coefficient for the AFR variable is statistically insignificant, indicating no discernible differences in audit fee changes between pre- and post-AFR periods among non-switching firms. In

contrast, the coefficient for the interaction term AFR × Switch is significantly positive, lending support to the first hypothesis. This implies that firms that undergo auditor switching experience a reduction in audit fee discounts subsequent to the AFR regulation compared to those that do not switch auditors. Moreover, the analysis reveals that changes in the auditor's report from qualified to unqualified are negatively related to audit fees. This finding aligns with previous literature, such as Hay et al. (2006), suggesting that unqualified audit opinions require less audit effort, which in turn results in auditors being less likely to impose higher fees.

5-2-2. Examining the Second Hypothesis

Table 6 presents the estimation results for Model (2). In line with the second hypothesis, the analysis reveals that the audit fee discount is significantly higher when switching to non-Top auditors (SwitchN) compared to switching to Top auditors (SwitchT). Specifically, the findings indicate that the initial audit fee discount averages approximately 21% when transitioning to a non-Top auditor, in contrast to just 9% when switching to a Top auditor. This suggests that the initial audit fee discount for non-Top auditors is three times greater than that for Top auditors.

These results are consistent with the findings of MohammadRezaei et al. (2018) and imply that Top auditors command premium audit fees, largely attributable to their enhanced bargaining power, which stems from their superior rankings within the industry. This disparity in fee structures may reflect the perceived quality and reliability associated with Top auditors, thereby justifying their higher charges. Additionally, the market dynamics may favor non-Top auditors in competitive scenarios, where they offer more substantial discounts to attract clients in a bid to enhance their market presence.

5-2-3. Examining the Third and Fourth Hypotheses

Table 6 also presents the estimation results for Model (3). In alignment with the third hypothesis, the analysis indicates that the audit fee discount is marginally higher when switching within non-Top auditors ($SwitchNN$) compared to switching within Top auditors ($SwitchTT$); however, the difference is minimal. Specifically, the fee discount associated with initial audit engagements is approximately 19.6% when switching from one Top auditor to another ($SwitchTT$), and around 19.7% when switching between non-Top auditors ($SwitchNN$) [1].

Further supporting the fourth hypothesis, the results in Table 6 demonstrate that the audit fee discount is greater when transitioning from Top to non-Top auditors ($SwitchTN$) than when switching from non-Top to Top auditors ($SwitchNT$). The discount offered is approximately 23% for switches from Top to non-Top auditors, representing the highest discount rate among the various forms of auditor switching. Conversely, no fee discount is observed when switching from non-Top to Top auditors ($SwitchNT$). These findings are consistent with previous research by Peel (2013) and MohammadRezaei and Mohd-Saleh (2017), indicating that the most significant discount occurs when moving from a Top to a non-Top auditor, while the least significant discount is evident when switching from a non-Top to a Top auditor. This pattern suggests that a lower-bargaining-power auditor replaces a higher-bargaining-power auditor, reflecting the inherent market dynamics at play.

To address potential concerns regarding the confounding effects of differences in characteristics between switched and non-switched firms, which may arise from functional misspecification and self-selection biases in auditor switching, we re-examine the second to fourth hypotheses using a matched sample via the propensity score matching (PSM) approach, encompassing 380 firm-year observations. This methodological adjustment aims to enhance the robustness of our findings and mitigate biases, ensuring that the observed effects of auditor switching on fee discounts are not unduly influenced by extraneous factors. Untabulated results show that the $SwitchT$, $SwitchN$, $SwitchTT$, $SwitchNN$, $SwitchNT$, and $SwitchTN$ are -0.117 (p = 0.026), -0.227 (p = 0.001), -0.226 (p = 0.001), -0.212 (p = 0.004), 0.055 (p = 0.454), and -0.252 (p = 0.004), respectively. Such findings reveal that our findings about second to fourth hypotheses are robust to different specifications.

1. According to Peel (2013), the small difference in fee discounts between switches within Top and Non-Top auditors is associated with the relative bargaining power of the clients as well since the clients of Top auditors are often large and powerful negotiators. In additional tests, the effect of the client's bargaining power is controlled and tested.

Table 6. Regression Estimation for the Audit Fees Change Regression Model

Variables	Expected sign	Model (1) Full sample		Model (1) Matched sample via PSM		Model (2)		Model (3)	
		Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Intercept	?	0.203***	4.97	0.232***	4.07	0.266***	4.91	0.270***	5.00
Switch	-	-0.254***	-6.26	-0.298***	-6.12				
AFR	+	0.018	0.77	0.002	0.05				
AFR×Switch	+	0.109**	2.06	0.126**	2.00				
SwitchT	-					-0.091**	-2.08		
SwitchN	-					-0.213***	-4.02		
SwitchTT	-							-0.196***	-4.00
SwitchNN	-							-0.197***	-3.08
SwitchNT	+							0.077	1.16
SwitchTN	-							-0.235***	-2.86
UQual-to-Qual	+	0.017	0.38	-0.021	-0.39	0.042	0.66	0.031	0.49
Qual-to-UQual	-	-0.053	-1.42	-0.096**	-2.01	-0.074*	-1.70	-0.068	-1.61
Δ Assets	+	0.008	0.22	0.050	0.89	-0.010	-0.26	-0.010	-0.25
Δ Lev	+	0.059	1.22	0.117	1.58	0.081	1.31	0.070	1.13
Δ InvRec	+	0.032	1.14	0.076	1.62	0.000	0.01	0.002	0.07
Δ Liq	-	0.019	0.75	0.038	1.04	0.044	1.27	0.039	1.10
Δ ROA	-	-0.001	-0.56	-0.000	-0.31	-0.001	-0.65	-0.001	-0.53
Loss-to-NLoss	-	0.014	0.33	0.016	0.23	0.040	0.83	0.045	0.92
NLoss-to-Loss	+	-0.017	-0.41	-0.021	-0.33	0.052	0.81	0.066	1.04
NSub-to-Sub	+	0.075	0.69	0.148	0.85	0.203	1.02	0.163	0.87
Sub-to-NSub	-	-0.025	-0.46	-0.067	-1.13	-0.075	-1.38	-0.095	-1.50
NStown	-	-0.014	-0.66	-0.018	-0.58	-0.014	-0.53	-0.023	-0.82
AudTop	+	0.035	1.62	0.127***	4.4	-0.001	-0.05	-0.003	-0.10
IndustryDum		Yes		Yes		Yes		Yes	
YearDum		Yes		Yes		Yes		Yes	
R^2		0.073		0.144		0.090		0.111	
F-Stat		4.23***		5.74***		3.16***		3.60***	
N		1215		630		702		702	

Note: *,**, ***Significance at 0.10, 0.05, 0.01 levels, respectively

5-3. Sensitivity Tests

5-3-1. Sample Selection Bias

As previously noted, over half of clients in Iran do not voluntarily disclose their audit fees. In light of this situation, the role of auditor switching is examined within a subgroup of firms that have opted to disclose their audit fees. Consequently, the regression models estimated based on this sample are subject to two types of errors. First, sample selection bias arises due to the non-random selection of firms willing to disclose their audit fees. Second, there is an error in assuming that the same variables determine firms' willingness to disclose audit fees without hesitation (Greene, 2003).

To address the sample selection bias associated with the dependent variable (i.e., audit fees), we employ the Heckman standard two-step method. In Model (4), the selection model, the binary variable for $FeeDisclosure$ is regressed on various determinants, as previously documented in the literature (e.g., Bedard et al., 2010; MohammadRezaei & Mohd-Saleh, 2017). Following this, the coefficients from the selection model are utilized to compute the inverse Mills ratio (IMR), which accounts for both observable and unobservable determinants affecting a firm's willingness to report audit fees.

Our analysis indicates that the IMR is not statistically significant, suggesting that we do not encounter issues related to sample selection bias. Subsequently, Models (1), (2), and (3) are re-estimated to investigate the impact of auditor switching on audit fees. In this analysis, we utilize a total of 2,997 firm-year observations, which include 1,215 observations with voluntary fee disclosure (the primary sample) and 1,782 observations lacking voluntary fee disclosure (i.e., censored observations) to effectively calculate the Heckman standard two-step model. By implementing this robust

methodological framework, we enhance the reliability of our findings regarding the influence of auditor switching on audit fees, while effectively controlling for potential biases that could distort the results.

$$\begin{aligned} FeeDisclosure_{it} &= \beta_0 + \beta_1 Switch_{it} + \beta_2 AudTop_{it} + \beta_3 AudOpn_{it} + \beta_4 Size_{it} + \beta_5 Lev_{it} + \beta_6 InvRec_{it} + \beta_7 Liq_{it} \\ &+ \beta_8 ROA_{it} + \beta_9 Busy_{it} + \beta_{10} Subs_{it} + \beta_{11} LogAge_{it} + \beta_{12} ConOwn_{it} + \beta_{13} StOwn_{it} + \beta_{14} TSE_{it} \\ &+ \sum \beta_j IndustryDum + \beta_k YearDum + \varepsilon_{it} \end{aligned} \quad (4)$$

The results of estimating Models (1), (2) and (3) with the Hackman two-step method are demonstrated in Table 7. These findings are in accordance with our main findings in Table 6. Hence, we fail to detect a problem about sample selection bias and our initial findings are robust.

Table 7. Heckman Testing for Sample Selection Bias

Variables	Expected sign	Dependent variable: Δ Audfees		Dependent variable: Δ Audfees		Dependent variable: Δ Audfees	
		Coefficient	z-stat	Coefficient	z-stat	Coefficient	z-stat
Intercept	?	0.198***	5.00	0.253***	4.31	0.245***	4.21
Switch	-	-0.253***	-6.99				
AFR	+	0.016	0.68				
AFR×Switch	+	0.108**	2.32				
SwitchT	-			-0.090**	-2.26		
SwitchN	-			-0.211***	-4.67		
SwitchTT	-					-0.195***	-4.19
SwitchNN	-					-0.199***	-3.53
SwitchNT	+					0.082	1.43
SwitchTN	-					-0.233***	-3.60
INVMills	?	0.003	0.13	0.012	0.34	0.026	0.72
Control variables		Yes		Yes		Yes	
IndustryDum		Yes		Yes		Yes	
YearDum		Yes		Yes		Yes	
Wald Chi2		96.79***		69.00***		87.94***	
Total obs		2997		2107		2107	
Censored obs		1782		1405		1405	
Uncensored obs		1215		702		702	

Note: *,**, ***Significance at 0.10, 0.05, 0.01 levels, respectively

5-3-2. Audit Fee Changes in the Years Following the Initial Engagement

Cho et al. (2021) provide evidence that auditors who practice lowballing often recoup the discounted amounts in subsequent years. Following previous research (e.g., Cho et al., 2021; Ghosh & Lustgarten, 2006), we analyze the changes in audit fees in the years following the initial engagement. In Iran, there is a legal mandate to rotate auditors every four years. Consequently, we define three new variables: $Switch2$ (the second year after the auditor switch), $Switch3$ (the third year after the auditor switch), and $Switch4$ (the fourth year after the auditor switch).

The untabulated results for the entire period from 2006 to 2019 indicate that the estimated coefficients for $Switch2$, $Switch3$, and $Switch4$ are 0.186 ($P < 0.01$), 0.099 ($P < 0.01$), and 0.126 ($P < 0.01$), respectively. Similar trends are observed for the period following the implementation of the AFR from 2013 to 2019. Notably, the greatest recovery of fee discounts is observed in the second year post-initial engagement. This suggests that, akin to the findings of Cho et al. (2021), Iranian auditors strategically increase their fees in the subsequent years after the switch. This increase leverages their competitive advantage over their predecessors to recoup the initially discounted amounts.

5-3-3. Fee Levels Specification

As previously discussed, there are two approaches to examining the effect of auditor switching on fee discounts: the fee levels approach and the first difference approach. We explained why the fee levels or cross-sectional approach could not be applied in this study, unlike the methods used by Craswell

and Francis (1999) and Simon and Francis (1988). The superiority of first difference models over fee levels or cross-sectional models was highlighted, particularly in the context of Iran (Ghosh & Lustgarten, 2006; MohammadRezaei & Mohd-Saleh, 2017). However, in this section, we retest the hypotheses using a fee levels model to determine its capability in estimating audit fee discounts in Iran's high-inflationary economy. Following previous studies (e.g., Blankley et al., 2012; MohammadRezaei et al., 2018; Simon & Francis, 1988;), the fee levels model is expanded as follows[1].

$$\begin{aligned} LogFee_{it} = {} & \beta_0 + \beta_1 Switch_{it} + \beta_2 AFR_{it} + \beta_3 AFR \times Switch_{it} + \beta_4 AudTop_{it} + \beta_5 AudOpn_{it} + \beta_6 Size_{it} + \beta_7 Lev_{it} \\ & + \beta_8 InvRec_{it} + \beta_9 Liq_{it} + \beta_{10} Loss_{it} + \beta_{11} ROA_{it} + \beta_{12} Busy_{it} + \beta_{13} Subs_{it} + \beta_{14} LogAge_{it} \\ & + \beta_{15} ConOwn_{it} + \beta_{16} NStOwn_{it} + \beta_{17} Inflation_{it} + \sum \beta_j IndustryDum + \varepsilon_{it} \end{aligned} \quad (5)$$

Untabulated results reveal that the estimated coefficients for $Switch$, AFR, $AFR \times Switch$, $SwitchT$, $SwitchN$, $SwitchTT$, $SwitchNN$, $SwitchNT$, and $SwitchTN$ are -0.039 (p = 0.461), 0.385 (P < 0.01), -0.019 (p = 0.796),-0.069 (p = 0.200), -0.103 (p = 0.108), -0.023 (p = 0.746), -0.072 (p = 0.324), -0.144 (p = 0.023), and -0.147 (p = 0.158), respectively. Consistent with findings and the discussion made by MohammadRezaei and Mohd-Saleh (2017), our analysis shows that the fee levels model may not provide accurate results in the high-inflation economy of Iran in testing audit fee discount in initial engagements.

5-3-4. Differences in Audit Quality

Audit fee discounts may stem from differences in audit quality, yet they can be erroneously attributed to auditor switching (Ghosh & Lustgarten, 2006). The findings of the current study indicate that fee discounts tend to be greater when transitioning to non-Top auditors compared to Top auditors. However, it is essential to further examine the quality differentials between Top and non-Top auditors, despite the research by MohammadRezaei et al. (2018), which demonstrated that Top auditors do not necessarily deliver higher-quality audit services than their non-Top counterparts.

In this context, audit opinion (AudOpn) [2] and Type II audit error (AudFailB) serve as proxies for audit quality. AudOpn is a binary variable that assumes a value of one when the audit opinion is qualified, and zero when it is unqualified. A qualified audit opinion, issued without compromising auditor independence, is likely indicative of higher audit quality (DeFond & Zhang, 2014). Conversely, regarding Type II audit error (AudFailB), this variable is assigned a value of one if the auditor provides an unqualified opinion in the current fiscal year, yet the client's financial statements require restatement in the subsequent fiscal year (indicating identified annual adjustments); otherwise, it is coded as zero (MohammadRezaei et al., 2018). Fewer audit errors correlate with higher audit quality, as supported by Knechel and Shefchik (2014).

Untabulated results for $AudOpn$ models reveal that the estimated coefficients for $Switch$, AFR, $AFR \times Switch$, $SwitchT$, $SwitchN$, $SwitchTT$, $SwitchNN$, $SwitchNT$, and $SwitchTN$ are 0.098 (p = 0.585), -0.184 (P = 0.273), -0.138 (p = 0.550), 0.065 (p = 0.656), 0.167 (p = 0.329), -0.084 (p = 0.636), 0.302 (p = 0.183), 0.315 (p = 0.171), and 0.004 (p = 0.984), respectively. Untabulated results

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1. In addition, the following models are used to examine the relationship between different forms of auditor switching and audit fees:

$$LogFee_{it} = \beta_0 + \beta_1 SwitchT_{it} + \beta_2 SwitchN_{it} + \beta_3 AudTop_{it} + \beta_4 AudOpn_{it} + \beta_5 Size_{it} + \beta_6 Lev_{it} + \beta_7 InvRec_{it} + \beta_8 Liq_{it} + \beta_9 Loss_{it} + \beta_{10} ROA_{it} + \beta_{11} Busy_{it} + \beta_{12} Subs_{it} + \beta_{13} LogAge_{it} + \beta_{14} ConOwn_{it} + \beta_{15} NStOwn_{it} + \beta_{16} Inflation_{it} + \sum \beta_j IndustryDum + \varepsilon_{it}$$

$$LogFee_{it} = \beta_0 + \beta_1 SwitchTT_{it} + \beta_2 SwitchNN_{it} + \beta_3 SwitchNT_{it} + \beta_4 SwitchTN_{it} + \beta_5 AudTop_{it} + \beta_6 AudOpn_{it} + \beta_7 Size_{it} + \beta_8 Lev_{it} + \beta_9 InvRec_{it} + \beta_{10} Liq_{it} + \beta_{11} Loss_{it} + \beta_{12} ROA_{it} + \beta_{13} Busy_{it} + \beta_{14} Subs_{it} + \beta_{15} LogAge_{it} + \beta_{16} ConOwn_{it} + \beta_{17} NStOwn_{it} + \beta_{18} Inflation_{it} + \sum \beta_j IndustryDum + \varepsilon_{it}$$

2. $$AudOpn_{it} / AudFailB_{it} = \beta_0 + \beta_1 Switch_{it} + \beta_2 AFR_{it} + \beta_3 AFR \times Switch_{it} + \beta_4 Size_{it} + \beta_5 Lev_{it} + \beta_6 Liq_{it} + \beta_7 ROA_{it} + \beta_8 LogAge_{it} + \beta_9 ConOwn_{it} + \beta_{10} StOwn_{it} + \beta_{11} Busy_{it} + \beta_{12} Subs_{it} + \sum \beta_j IndustryDum + \beta_k YearDum + \varepsilon_{it}$$

$$AudOpn_{it} / AudFailB_{it} = \beta_0 + \beta_1 SwitchT_{it} + \beta_2 SwitchN_{it} + \beta_3 Size_{it} + \beta_4 Lev_{it} + \beta_5 Liq_{it} + \beta_6 ROA_{it} + \beta_7 LogAge_{it} + \beta_8 ConOwn_{it} + \beta_9 StOwn_{it} + \beta_{10} Busy_{it} + \beta_{11} Subs_{it} + \sum \beta_j IndustryDum + \beta_k YearDum + \varepsilon_{it}$$

$$AudOpn_{it} / AudFailB_{it} = \beta_0 + \beta_1 SwitchTT_{it} + \beta_2 SwitchNN_{it} + \beta_3 SwitchNT_{it} + \beta_4 SwitchTN_{it} + \beta_5 Size_{it} + \beta_6 Lev_{it} + \beta_7 Liq_{it} + \beta_8 ROA_{it} + \beta_9 LogAge_{it} + \beta_{10} ConOwn_{it} + \beta_{11} StOwn_{it} + \beta_{12} Busy_{it} + \beta_{13} Subs_{it} + \sum \beta_j IndustryDum$$

for $AudFailB$ models reveal that the estimated coefficients for $Switch$, AFR, $AFR \times Switch$, $SwitchT$, $SwitchN$, $SwitchTT$, $SwitchNN$, $SwitchNT$, and $SwitchTN$ are -0.187 (p = 0.584), -0.826 (P = 0.016), 0.201 (p = 0.638), 0.135 (p = 0.609), -0.219 (p = 0.432), 0.035 (p = 0.905), -0.455 (p = 0.206), 0.402 (p = 0.414), and 0.132 (p = 0.766), respectively.

Consistent with MohammadRezaei et al. (2018), our findings show that there is no significant difference between Top and non-Top auditors in terms of quality, and that top auditors demand higher fees from their clients only due to their higher bargaining power and reputation as quality auditors. Therefore, it can be argued that the estimated coefficients for the relationship between auditor switching and audit fees can be attributed to the auditor switch itself, and there is no significant difference between Top and non-Top auditors in terms of quality.

5-3-5. Do Higher Fee Discounts Results in Lower Audit Quality?

Various studies have explored the impact of lowballing on audit quality (e.g., Cho et al., 2021; Stanley et al., 2015). In this research, we introduce a new variable, $FeeCutM$, to examine the effect of fee discounts on audit quality. $FeeCutM$ is a binary variable that is assigned a value of one for observations that exceed the median of the $\Delta AudFee$ variable each year, and zero otherwise. For the assessment of audit quality, we utilize audit opinion ($AudOpn$) and Type II audit error ($AudFailB$) as proxies. Preliminary results from the models incorporating $AudOpn$ indicate that the estimated coefficient for $FeeCutM$ is -0.008 (P = 0.914). In the models for $AudFailB$, the estimated coefficient for $FeeCutM$ is 0.048 (P = 0.719). These findings suggest that there is no statistically significant relationship between the magnitude of fee discounts and audit quality.

Our results align with the conclusions of Cho et al. (2021), reinforcing the notion that fee discounting does not adversely impact the quality of audit services provided. This lack of a significant relationship may indicate that auditors, regardless of fee reductions, maintain a standard level of diligence and independence in their audit processes.

5-3-6. Clients and Auditors Ranking Mismatch and Fee Discounts

In Iran, alongside the ranking of auditing firms (TAFs), client firms are also categorized by the Securities and Exchange Organization (SEO) based on various characteristics, including revenue, total assets, and the number of employees. Both client firms and audit firms are classified into four tiers (i.e., first to fourth). According to Notes 6 and 7, client firms are required to select an auditor that falls within their own tier or a higher tier. This requirement leads to fee discounts through two primary mechanisms: first, when the ranks of the client firm and the auditor are identical, and second, when the auditor holds a higher rank than the client firm. Given the differing classes of client firms and auditors, which also affects their bargaining power, it appears that fee discounts are more pronounced when there is a disparity in rankings.

As previously discussed, the auditing of most major clients (those ranked first) has been predominantly assigned to the Iranian Audit Organization (IAO), the state auditor. Consequently, private auditors with high bargaining power (also ranked first) have a minimal share of these significant clients. In our sample, based on the ranking guidelines established by the SEO, there are only 55 instances where the ranks of auditors and clients are equivalent (the matched group). This limited number of observations precludes a robust analysis of the relationship between matching and mismatching in bargaining power between auditors and clients.

To further investigate this relationship, we employed the natural logarithm of client assets, classifying them into four quartile-based groups annually. We introduced a new variable termed "Match," which is a binary variable that equals one when the ranks of the auditor and the client firm are equal, and zero otherwise. We then categorized the observations into two distinct groups based on the Match variable and applied a Propensity Score Matching (PSM) approach to align observations within each subsample.

For the first hypothesis, the untabulated results indicate that the estimated coefficients for the variables $Switch$, AFR, and AFR × Switch are as follows: for observations where the auditor and the client firm share the same rank (194 observations), the coefficients are β = -0.280, P < 0.01, β = 0.019, P = 0.803, and β = 0.064, P = 0.541. Conversely, when the ranks differ (438 observations), the coefficients are β = -0.307, P < 0.01, β = -0.011, P = 0.832, and β = 0.137, P = 0.092. For the second

to fourth hypotheses, we examined whether the Match variable moderates our primary findings. The untabulated results reveal that the coefficients for the interactions—SwitchT × Match, SwitchN × Match, SwitchTT × Match, SwitchNN × Match, SwitchNT × Match, and SwitchTN × Match—are -0.017 (p = 0.874), -0.031 (p = 0.737), 0.026 (p = 0.826), 0.021 (p = 0.844), 0.173 (p = 0.501), and -0.102 (p = 0.490), respectively.

5-3-7. Client's Bargaining Power

Audit fee discounts may be affected by the bargaining power of the client vis-à-vis the auditor (Casterella et al., 2004; Huang et al., 2007)—an issue that may distort interpretations of the results. In order to examine the effect of the client's bargaining power (importance), the sample firms are divided by size into small and big groups ($CBigM$) based on the median of firms' total assets for each year and industry. The clients are also divided into small and big groups based on the 25th and 75th percentiles. That is, clients are considered to be *big* if the natural logarithm of their assets is above the 75th percentile and *small* if the natural logarithm of their assets is below the 25th percentile. The proxies for *big* ($CBigQ4$) and *small* clients ($CSmallQ1$) are incorporated into Models (1), (2), and (3) both separately and in interaction with other independent variables.

Table 8 reveal that the results for $CBigM \times SwitchT$ and $CSmallQ1 \times SwitchT$ are just significant at 0.10 level. Such findings reveal that just in two cases from the 21 interaction variables depicted in Table 8, clients bargaining power plays a role. Hence, consistent with Cho et al. (2021) and MohammadRezaei and Mohd-Saleh (2017), it can be concluded that the main findings are not affected by the client's bargaining power.

Table 8. Regression Results Reported only for the Independent Variables, Clients Bargaining Power

Variables	Expected sign	Dependent variable: Δ Audfees	
		Coefficient	t-stat
CBigM × Switch	?	-0.084	-1.40
CBigM × SwitchT	?	-0.142*	-1.79
CBigM × SwitchN	?	-0.080	-0.79
CBigM × SwitchTT	?	-0.126	-1.47
CBigM × SwitchNN	?	0.007	0.06
CBigM × SwitchNT	?	-0.011	-0.08
CBigM × SwitchTN	?	-0.207	-1.33
CBigQ4 × Switch	?	-0.099	-1.30
CBigQ4 × SwitchT	?	0.004	0.04
CBigQ4 × SwitchN	?	-0.197	-1.24
CBigQ4 × SwitchTT	?	0.047	0.40
CBigQ4 × SwitchNN	?	-0.261	-1.63
CBigQ4 × SwitchNT	?	0.189	0.73
CBigQ4 × SwitchTN	?	-0.113	-0.42
CSmallQ1 × Switch	?	0.075	1.05
CSmallQ1 × SwitchT	?	0.152*	1.71
CSmallQ1 × SwitchN	?	0.023	0.22
CSmallQ1 × SwitchTT	?	0.143	1.49
CSmallQ1 × SwitchNN	?	0.095	0.69
CSmallQ1 × SwitchNT	?	0.058	0.42
CSmallQ1 × SwitchTN	?	-0.075	-0.48

5-3-8. Voluntary vs. Mandatory Auditor Switches

Audit fee discounts may differ between voluntary and mandatory auditor switches (e.g., Kwon et al., 2014; Stewart et al., 2016). To investigate this distinction, we modified Model (1) by removing the Switch variable and incorporating two new variables: Mandatory Switch ($MSwitch$) and Voluntary Switch ($VSwitch$). It is important to note that $MSwitch$ has been implemented since 2012, which is just one year prior to the establishment of the AFR. Consequently, we only included the AFR and the interaction term $AFR \times VSwitch$ in the $VSwitch$ model, excluding observations associated with $MSwitch$, resulting in a total of 113 excluded observations.

Untabulated results for the $VSwitch$ model indicate that the estimated coefficients for $VSwitch$, AFR, and $AFR \times VSwitch$ are as follows: β = -0.256, P < 0.01, β = -0.047, P = 0.362, and β = 0.215,

P = 0.014, respectively. These findings are consistent with our first hypothesis and suggest that the findings are not significantly influenced by the type of auditor switch (MSwitch or VSwitch).

Next, we re-examined the second, third, and fourth hypotheses by utilizing two distinct subsamples. In the first subsample, we excluded observations with $MSwitch$, while in the second subsample, we excluded observations with $VSwitch$. The analysis of the voluntary auditor switches subsample revealed the following estimated coefficients for the variables $SwitchT$, $SwitchN$, $SwitchTT$, $SwitchNN$, $SwitchNT$, and $SwitchTN$: -0.032 (p = 0.50), -0.279 (p < 0.01), -0.189 (p < 0.01), -0.251 (p < 0.01), 0.214 (p < 0.01), and -0.322 (p < 0.01), respectively. In a parallel examination of the mandatory auditor switches subsample, the estimated coefficients for the same variables were -0.204 (p < 0.01), -0.368 (p < 0.01), -0.271 (p < 0.01), -0.322 (p < 0.01), -0.043 (p = 0.411), and -0.408 (p < 0.01), respectively.

These findings collectively indicate that our main results remain robust even after controlling for the roles of voluntary and mandatory auditor switches. The consistent patterns observed in both subsamples suggest that the nature of the auditor switch does not materially alter the overall conclusions of the research regarding audit fee discounts.

5-3-9. Bargaining Power vs. Market Power

Market power and bargaining power, while related, are distinct concepts. In this study, we explore whether variations in auditor fee discounts are attributable to differences in their bargaining power or market power. To assess the role of market power, we define the variable MrkPow as the ratio of each audit firm's total income in year t to the total income of all audit firms in the same year. With income data for audit firms available since 2014 from the Iranian Association of Certified Public Accountants (IACPA), we analyze the effect of market power using a dataset of 560 firm-year observations.

Our untabulated results indicate that the estimated coefficients for the variables $Switch$, $MrkPow$, and $Switch \times MrkPow$ are -0.161 (p = 0.002), 1.245 (p = 0.436), and 4.657 (p = 0.157), respectively. To further probe the moderating role of $MrkPow$, we conducted a subsample analysis focusing solely on top-tier auditors, comprising 324 firm-year observations. This allowed us to control for auditors' bargaining power, isolating the net effect attributable to market power. In this subsample, the untabulated results reveal that the estimated coefficients for $Switch$, $MrkPow$, and $Switch \times MrkPow$ are -0.166 (p = 0.016), 1.574 (p = 0.331), and 4.023 (p = 0.226), respectively. These findings suggest that market power is less likely to be a significant predictor or explanatory factor for auditor switching and fee discounting within the context of our study.

Overall, the analysis indicates that while market power does interact with auditor switching and fee discounting, it does not play a dominant role in explaining these phenomena when compared to bargaining power. This highlights the complexity of market dynamics and suggests the need for further investigation into additional factors influencing audit pricing strategies.

5-3-10. AFR and Different Types of Auditor Switching

We also examined the second to fourth hypotheses of our study in both the pre- and post-AFR periods. Due to the absence of a formal ranking system prior to 2013, we utilized the TAF's (Top Auditing Firms) ranking from 2014 to assess audit firms during the pre-AFR period. This choice is supported by the methodology of MohammadRezaei et al. (2018), which posits that the 2014 rankings were newly established, featuring many prominent and historically significant firms among the top-ranked auditors. Furthermore, subsequent rankings in the following years have exhibited minimal variation compared to those of 2014.

For the second to fourth hypotheses, untabulated results show that the $SwitchT$, AFR, $AFR \times SwitchT$, $SwitchN$, AFR, $AFR \times SwitchN$, $SwitchTT$, AFR, $AFR \times SwitchTT$, $SwitchNN$, AFR, $AFR \times SwitchNN$, $SwitchNT$, AFR, $AFR \times SwitchNT$, $SwitchTN$, AFR, and $AFR \times SwitchTN$ are -0.199 (p= 0.002), 0.079 (p= 0.034), -0.030 (p= 0.689), -0.449 (p < 0.01), 0.0007 (p = 0.984), 0.234 (p = 0.001), -0.344 (p < 0.01), 0.058 (p = 0.104), 0.028 (p = 0.696), -0.398 (p < 0.01), 0.044 (p= 0.217), 0.153 (p= 0.069), 0.138 (p= 0.253), 0.072 (p= 0.034), -0.193 (p= 0.158), -0.495 (p < 0.01), 0.029 (p= 0.389), and 0.228 (p= 0.027), respectively.

These findings, derived from a total of 630 observations, reveal interesting patterns consistent with the results of Jing (2019) in China, who hypothesized and demonstrated that audit fee regulation had a

more positive effect on the audit fees of smaller audit firms. In alignment with this, our findings suggest that, consistent with previous studies highlighting the premium associated with large audit firms and the findings of MohammadRezaei et al. (2018) regarding fee premiums for top auditors, the AFR has had a more pronounced impact in reducing fee discounts for non-top auditors, as evidenced by the metrics $SwitchN$, $SwitchNN$, and $SwitchTN$.[1]

Overall, these results underscore the complex dynamics between audit fee regulation and the pricing strategies of various audit firms, suggesting that regulatory frameworks can have differential impacts based on firm size and market positioning. This could imply that non-top auditors may benefit from increased regulatory scrutiny, which could serve to level the playing field in terms of fee structures, while also indicating that larger firms maintain their fee premiums despite regulatory changes.

6. Conclusion

Audit fee discounts during initial audit engagements pose a significant challenge that has garnered the attention of regulators, practitioners, and academics alike. While extensive research has explored this topic, there remains limited evidence regarding the influence of regulation on audit fee discounts as an exogenous shock, especially in audit markets where the Big N firms are either absent or not dominant, and where demand and supply for quality services are low but auditor competition is intense. The Iranian audit market exemplifies this type of market environment.

The introduction of AFR in Iran, following the ranking of Trustee Auditing Firms (TAFs) by the Securities and Exchange Organization (SEO) since 2013, has led to various forms of auditor switching within and between different classes (Top and non-Top auditors). This regulatory landscape offers a unique opportunity to investigate whether AFR influences audit fee discounts in initial engagements and whether different auditor classes, as segmented by SEO—based on authoritative differentiation rather than quality-based criteria—offer varied fee discounts due to differences in bargaining power.

Our findings indicate a positive association between the implementation of AFR and reduced audit fee discounts in Iran. Audit fee discounts are more pronounced when engaging non-Top auditors compared to Top auditors, when switching between non-Top auditors compared to within Top auditors, and when transitioning from Top to non-Top auditors compared to the reverse. These results suggest that in markets with low-quality demand and high competition, some auditors still manage to offer reduced audit fee discounts due to superior bargaining power, influenced by regulatory interventions rather than inherent quality differentiation or market power. Furthermore, by preventing high-bargaining-power clients (large clients) from selecting low-bargaining-power auditors (non-Top), and by increasing the number and market share of high-bargaining-power auditors (Top), AFR contributes to decreased fee discounts in initial audit engagements.

This research has significant implications for regulators and practitioners. It highlights the effects of SEO's audit firm ranking and the role of AFR in mitigating audit fee discounts, particularly where lowballing is a major concern, as noted by Jing (2019) in the Chinese audit market. Additionally, this regulation has enabled some auditors to reduce fee discounts for initial engagements. Regulators must remain vigilant about lowballing, especially where audit fees are typically low. Consistent with the 2010 Chinese regulatory initiative establishing minimum audit fees, our analysis shows that AFR's

1. We attempted to employ a Difference-in-Differences (DiD) analysis to examine the impact of the Auditor Fee Regulation (AFR) as an exogenous shock on various types of auditor switching, both between and within classes. However, we encountered limitations that rendered this approach unsuitable for our models. First, it is important to note that prior to the implementation of the AFR, there were no distinct types of auditor switching, such as $SwitchT$, $SwitchN$, $SwitchTT$, $SwitchNN$, $SwitchNT$, or $SwitchTN$. This lack of differentiation in switching types during the pre-AFR period hinders the applicability of DiD analysis, which relies on comparing changes over time between treatment and control groups. Additionally, the AFR was applied uniformly to both top-tier and non-top-tier auditors. This uniformity presents a challenge for isolating the effects of the regulation, as it does not allow for a clear delineation between the impacts on different auditor classes. The absence of variation in the treatment (the imposition of AFR) across auditor types complicates the identification of differential effects resulting from auditor switching behavior. Consequently, the limitations inherent in our dataset and the uniform application of the AFR suggest that alternative methodologies may be necessary to rigorously assess the impact of the regulation on auditor switching dynamics. Future research could benefit from exploring different analytical frameworks that account for these constraints and further investigate the nuances of auditor behavior in response to regulatory changes.

impact on reducing fee discounts is more pronounced for smaller audit firms. Consequently, regulatory initiatives in similar audit markets could enhance the bargaining power of small audit firms.

The implications of our study could extend to regulatory bodies in other countries, particularly in audit market segments where the Big N is not dominant, and where "check the box" compliance services prevail amid high competition, as seen in China. For client companies seeking to secure greater audit fee discounts during initial engagements, it is recommended to avoid switching to auditors with strong bargaining power. Instead, they might consider firms with lower bargaining power. Audit firms, moreover, should assess the bargaining power of prior auditors when negotiating initial audit fees and adjust their strategies accordingly.

Our study also paves the way for future research to explore the effects and extents of audit regulation on initial audit fee discounts. Further studies could investigate discounts by Big N, mid-tier, and small auditors in the unlisted firms' audit market to determine whether higher audit quality correlates with lower discounts, and how these discounts influence audit quality. Additionally, future research can examine the impact of different auditor switching forms on audit fee stickiness and variations between successors and incumbents. Finally, the relationships between various forms of auditor switching and issues such as audit report lag warrant further investigation.

A potential limitation of this study should be considered when interpreting the results. Although some limitations were addressed using Heckman's procedures in supplementary tests, not all clients in our sample disclosed audit fees in their financial statements. This paucity of audit fee data in certain cases restricts the research setting, and caution must be exercised when generalizing these results to such companies.

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Appendix. Variable Definitions

Variable	Definition
$AudFee$	Audit fees that are separately disclosed in financial statement notes.
$LogAudFee$	Natural logarithm of audit fees.
$\Delta AudFee$	Changes in current year's audit fees compared to last year and adjusted for inflation.
$Switch$	That takes the value of 1 if the client has switched auditor, and 0 otherwise.
AFR	A dummy variable that takes value of 1 for post-AFR era (the years 2013 to 2019) and zero for pre-AFR era (the years 2006 to 2012).
$AFR \times Switch$	A dummy variable that takes the value of 1 if auditor switching occurred post-AFR era (in the years 2013 to 2019) and 0 otherwise.
$SwitchT$	Takes the value of 1 if auditor switch is from one Top auditor to another or from a non-Top auditor to a Top auditor, and 0 otherwise.
$SwitchN$	Takes the value of 1 if auditor switch is from one non-Top auditor to another or from a Top auditor to a non-Top auditor, and 0 otherwise.
$SwitchTT$	Takes the value of 1 if auditor switch is from one Top auditor to another, and 0 otherwise.
$SwitchNN$	Takes the value of 1 if auditor switch is from one non-Top auditor to another, and 0 otherwise.
$SwitchNT$	Takes the value of 1 if auditor switch is from a non-Top auditor to a Top auditor, and 0 otherwise.
$SwitchTN$	Takes the value of 1 if auditor switch is from a Top auditor to a non-Top auditor, and 0 otherwise.
$Switch2$	Takes the value of 1 if the auditor audits a client for the second consecutive year, and 0 otherwise.
$Switch3$	Takes the value of 1 if the auditor audits a client for the third consecutive year, and 0 otherwise.
$Switch4$	Takes the value of 1 if the auditor audits a client for the fourth consecutive year (last year), and 0 otherwise.
$VSwitch$	That takes the value of 1 if the client has voluntarily switched auditor, and 0 otherwise.
$MSwitch$	That takes the value of 1 if the client, as required by law, has switched auditor, and 0 otherwise.
$AudTop$	Takes the value of 1 if the auditor belongs to the first class, and 0 otherwise.
$AudOpn$	Takes the value of 1 if the audit opinion is qualified, and 0 if the audit opinion is unqualified.
$Uqual\text{-}to\text{-}Qual$	Takes the value of 1 if the audit opinion changes from unqualified to qualified, and 0 otherwise.
$Qual\text{-}to\text{-}Uqual$	Takes the value of 1 if the audit opinion changes from qualified to unqualified, and 0 otherwise.
$Assets$	Total assets.
$Size$	Natural log of a firm's total assets.
Lev	Total debt divided by total assets.
$InvRec$	Total inventories and receivables divided by total assets.
Liq	Current assets divided by current liabilities.
ROA	Net income divided by total assets.
$\Delta Assets$	Changes in current year's total assets compared to last year.
ΔLev	Changes in current year's leverage compared to last year.
$\Delta InvRec$	Changes in current year's ratio of inventories and receivables to total assets compared to last year.
ΔLiq	Changes in current year's liquidity compared to last year.
ΔROA	Changes in current year's ROA compared to last year.
$Subs$	Takes the value of 1 if the firm has subsidiaries, and 0 otherwise.
$Loss$	Takes the value of 1 if the firm has incurred losses, and 0 otherwise.
$Busy$	Takes the value of 1 the end of the client firm's fiscal year is in the busy audit season, and 0 otherwise.
$Loss\text{-}to\text{-}Nloss$	Takes the value of 1 if the firm reports a loss for last year, but not for the current year.
$Nloss\text{-}to\text{-}loss$	Takes the value of 1 if the firm reports a loss for the current year, but not for last year.
$Nsub\text{-}to\text{-}Sub$	Takes the value of 1 if the firm has changes from no subsidiaries to having subsidiaries, and 0 otherwise.
$Sub\text{-}to\text{-}Nsub$	Takes the value of 1 if the firm has changes from having subsidiaries to no subsidiaries, and 0 otherwise.
$NstOwn$	Takes the value of 1 if more than 50% of a firm's shares are owned by the private sector, and 0 otherwise.
$StOwn$	Takes the value of 1 if more than 50% of a firm's shares are state- or semi-state-owned, and 0 otherwise.
$\Delta Management$	Takes the value of 1 if the management of a firm has changed, and 0 otherwise.
$Issue$	Takes the value of 1 if the firm has issued common or preferred stocks, and 0 otherwise.
$LogAge$	Natural log of firm age (number of years since its establishment).
$ConOwn$	Represents the percentage of the firm's stock held by the firm's largest shareholder.
$Inflation$	The annual inflation rate announced by the Central Bank of Iran.
$AudFailB$	Takes the value of 1 if type II audit error is identified, and 0 otherwise.
TSE	Takes the value of 1 if the client firm is listed on the TSE, and 0 otherwise (listed on OTC, Iran Fara Bourse).
$FeeCutM$	A dummy variable that takes one for the observations that are larger than the median of the ΔAudFee variable each year, and 0 otherwise.

$CBigM$	Takes the value of 1 if the natural log of the client's total assets is above the median in each year and industry, and 0 otherwise.
$CBigQ4$	Takes the value of 1 if the natural log of the client's total assets is above the 75th percentile in each year and industry, and 0 otherwise.
$CBigQ1$	Takes the value of 1 if the natural log of the client's total assets is below the 25th percentile in each year and industry, and 0 otherwise.
$Match$	A dummy variable that takes one if the rank of auditor and client firm rank is equal, and 0 otherwise.
$MdAudIncome$	Takes the value of 1 if the observation is audited by a first-ranked auditor's that its income is higher than the median income of all first-ranked auditor (in a yearly bases), and 0 otherwise
$INVMills$	Inverse Mills Ratio.
$IndustryDum$	Industry dummy.
$YearDum$	Dummies for fiscal years.
ε	Error term.