Managerial myopia and audit fees: Evidence from China

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Abstract. Following the upper echelons and time orientation theoretical frameworks, this study meticulously examines the effects of managerial myopia on audit fees utilizing data of Chinese A-share listed companies spanning from 2007 to 2022. Employing textual analysis and machine learning techniques on MD&A, we find that managerial myopia can significantly increase audit fees by intensifying financial constraints, diminishing accounting information comparability, and compromising internal control quality. However, this relationship is accentuated by analyst coverage but attenuated by digital transformation. Cross-sectionally, we document a particularly pronounced positive association between managerial myopia and audit fees within firms exhibiting higher corporate risk tolerance, diminished industrial competition and a lower degree of marketization. Collectively, this study further enriches corporate governance and audit fees literature, advancing valuable insights for regulators, accountants and auditors.

Keyword: Managerial myopia, audit fee, digital transformation, analyst coverage.

1. Introduction

In light of the escalating significance of sustainable development and intense market competition, cultivating a holistic and forward-looking vision becomes imperative for businesses to withstand external threats and sustain distinctive competitive advantages. Nevertheless, amidst the dual challenges of external uncertainty and internal performance pressure, not all managers naturally possess a future-oriented horizon. Against this unsettling backdrop, studies delving into the economic consequences of managerial myopia assume paramount significance. Anchored in the time orientation theory within social psychology, managerial myopia encapsulates a proclivity among management to prioritize immediate gratification over the long-term development of firms [1]. This subjective time perception is considered an intrinsic and enduring personal trait, wielding profound influence over corporate objectives, behaviors, and outcomes [2]. While extant literature has diligently explored the impacts of managerial myopia on corporate strategic decisions and overall performance, there has been a notable dearth of attention towards its implications for external audit institutions, particularly from the perspective of audit fees.

Audit fees refer to the consideration paid by clients for the provision of audit services, reflecting the supply and demand relationship under dynamic game. Reasonable audit fees not only enhance audit quality, but also safeguard the interests of investors, thereby facilitating the sound development of market economy. Since Simunic [3] pioneered the seminal casual model on audit fees, subsequent scholars have extensively examined its determinants. However, prevailing auditing research has predominantly centered around managerial demographic attributes, such as age, gender, tenure, turnover, and experience, with scarce studies exploring managerial myopia — an intrinsic quality of time preference. Therefore, this paper aims to bridge this gap by investigating the potential influence of managerial myopia on audit fees and unraveling the underlying mechanisms.

In this study, we utilize text mining and machine learning techniques to quantify the extent of managerial myopia. Using an extensive sample of Chinese A-share listed enterprises from 2007 to 2022, we document a positive association between managerial myopia and audit fees, which will be amplified by analyst coverage but weakened by digital transformation. Plausible explanations for our empirical results are elucidated through three mechanisms: financial constraints, accounting information comparability, and internal control quality. Through a comprehensive cross-sectional analysis, we discern that this positive relationship is particularly pronounced among enterprises

characterized by heightened corporate risk tolerance, diminished industrial competition, and lower degree of marketization.

The primary contributions of this paper are threefold: Firstly, it expands existing research on the economic consequences of managerial myopia and the determinants of audit fees by exploring a hitherto untested relationship. Secondly, we elucidate the specific mechanism between managerial myopia and audit fees, revealing the underlying 'black box' of this association. Thirdly, our study takes into account heterogeneous features such as corporate risk tolerance, industrial and market characteristics, providing practical implications for corporate decision-making, audit pricing determinations, and regulatory policy formulations.

The remainder of the paper is structured as follows. Section 2 reviews the recent literature on audit fees and managerial myopia, and Section 3 develops the research hypotheses. Section 4 describes the data and economic models. Empirical results are reported in Section 5, along with discussions on their robustness. Section 6 discusses additional analyses. Finally, Section 7 draws conclusions to finalize the paper.

2. Literature review

2.1. Audit fees

The classic audit fee model demonstrates that audit fees primarily comprise three components: inherent costs of essential audit procedures, audit risk premium, and normal profits of audit firms [3]. Prior studies have extensively examined the determinants of audit fees, including clients and audit firm characteristics, corporate governance, and managerial attributes.

Various client firm characteristics related to operations exert significant influence on audit fees. Extant studies consistently document a positive correlation between audit fees and firm size, complexity, profitability, leverage, and inherent risks [4,5]. Meanwhile, unanticipated performance like financing constraints [6] and earnings management [7] are associated with more specific audit procedures and audit risks, consequently leading to higher audit fees.

As the supplier of services, features of audit firms like size, tenure, turnover, and reputation premium exhibit a positive effect on audit fees [5]. Subsequent research also suggests that auditor's industry expertise and independence contribute to economies of scale within homogeneous industries, thereby diminishing audit pricing [8].

In the realm of corporate governance, scholars investigate that higher quality of internal controls [7] can significantly reduce audit fees. As for external governance, the presence of institutional oversight and political connections exerts a moderating influence on executive behavior, thereby contributing to the mitigation of agency costs and a subsequent reduction in audit fees.

Notably, recent studies are progressively exploring the link between managerial attributes and audit fees. It has been observed that female executives [9] and managerial ability [7] are correlated with elevated audit fees. Regarding psychological traits, auditors will incorporate the risks associated narcissism and overconfidence in their decisions, consequently resulting in higher audit pricing [10].

2.2. Managerial myopia

Extant literature demonstrates that managerial myopia exerts detrimental effects on firms, which can be summarized into two primary aspects: decision behaviors and corporate performance.

In terms of strategic decision, prevailing literature holds the view that managers characterized by a short-term horizon tend to underinvest in intangible assets, research and development (R&D), green innovation, advertising and staff training, rendering firms more susceptible to diminished return on investment and heightened financial distress [11]. Furthermore, myopic managers are inclined towards earnings manipulation and negative information concealment, such as premature recognition of earnings, aggressive tax avoidance and involvement in laundering activities [12,13].

From the perspective of corporate performance, managerial myopia poses serious threats to company growth, value maximization, and sustained competitive edge. Empirical studies by scholars

have identified an adverse association between managerial myopia and critical performance metrics, including firm productivity, return on equity (ROE), and performance growth [2,14]. From the standpoint of dynamic competitive capabilities, managerial myopia could undermine companies' adaptability and resilience to evolving external conditions, potentially steering firms into a precarious "success trap" [15].

Collectively, ample evidence underscores that audit fees are significantly influenced by managerial characteristics. While previous research has predominantly concentrated on the internal impact of managerial myopia within companies, a conspicuous gap exists in comprehending its association with audit fees from the auditors' perspective. Hence, this study serves as a pioneering investigation into this relationship, thereby extending the studies of managerial myopia beyond the corporate realm to external entities, effectively bridging the existing research gap.

3. Theoretical analysis and hypothesis development

3.1. Managerial myopia and audit fees

Drawing on the upper echelon theory, management wields a pivotal influence on sustainable development [2]. However, agency problems may arise due to the misaligned incentives between managers and shareholders, where information asymmetry acts as a protective veil that shields the myopic behavior. Given that auditors function as external governance mechanisms to mitigate agency costs, myopic managers possess strong motivations to intervene with the standard audit procedures, thereby resulting in greater audit efforts and corresponding fees.

First and foremost, myopic managers excessively prioritizing short-term gains have a propensity to overlook corporate sustainable competitiveness, thereby elevating operational risks and audit fees. Considering that managers' wealth, reputation and social status are tightly tied to the performance achieved during their tenure, they are likely to opt for safer short-term investment with immediate returns instead of riskier but promising long-term activities like R&D. Nonetheless, prior studies have underscored a favorable relationship between investments in innovation, corporate risk resilience, competitive advantage, and ultimate success [16]. Hence, companies may struggle with external threats and fall behind competitors in the long run, further eroding their sustainable competitiveness and raising operational risks. This scenario signals a heightened audit risk, culminating in an increased audit fee for additional risk compensation.

In addition, driven by selfish considerations such as salary, career advancement, empire building, and political promotion, myopic managers involve greater access to strategic disclosure and discretionary accounting. On the one hand, they tend to strategically disclosure favorable information like positive earnings while concealing unpleasant details, intentionally lowering the accounting information comparability. On the other hand, myopic managers typically exhibit higher propensity for financial fraudulent behavior, including financial statements manipulation and real earnings management [12], which further exacerbates moral hazards and raises the likelihood of financial misstatements. Consequently, such misconducts elevate information asymmetry and financial reporting risks, compelling auditors to allocate additional resources and broaden the scope to ensure the accuracy of audit opinions. Moreover, auditors will inevitably demand higher audit premiums as compensation for the associated risks, ultimately leading to an escalation in audit fees. In light of the foregoing exposition, our first hypothesis is advanced.

Hypothesis 1. Managerial myopia is positively associated with audit fees.

3.2. Moderating role of Analyst coverage

Existing literature underscores capital market pressure as a crucial external factor in shaping managerial myopia [17]. Financial analysts, equipped with advanced analytical capabilities, serve as the invaluable information intermediaries within the capital market. Through meticulous scrutiny of disclosed information and dissemination of insights to stakeholders, they can effectively alleviate the information asymmetry and curb managerial myopic behaviors.

Meanwhile, substantial evidence reveals that external monitoring tends to impose considerable performance pressure on management. Specifically, the frequent emphasis by analysts on short-term performance indicators has the potential to divert managerial attention away from sustainable business practices. Simultaneously, unattained performance targets stipulated in analysts' forecasts can trigger serious consequence, such as layoffs, reduced compensation, and potential erosion of corporate market value [17]. Driven by self-interest motivation, managers are prone to succumb to this pressure of meeting immediate financial expectations, thereby exhibiting more opportunistic behaviors that necessitates more rigorous auditing procedures. Consequently, analyst coverage may inadvertently reinforce a myopic orientation, further driving up audit fees. Accordingly, we derive the following hypothesis.

Hypothesis 2. Analyst coverage positively moderates the positive association between management myopia breaches and audit fees.

3.3. Moderating role of digital transformation

Flourishing digital transformation has disruptively transformed the businesses and corporate governance. Prior research has highlighted its role in promoting information transmission, optimizing resource allocation and enhancing operating efficiency [18].

First, digital transformation effectively mitigates information asymmetry, striking at the root of myopic behavior. Utilizing emerging technologies like big data and AI, firm anomalies can be easily detected. This enhanced transparency subject companies to real-time monitoring and public scrutiny, restraining myopic conducts and reducing audit risk premium. Moreover, the digitization of information allows auditors to acquire the necessary audit evidence with low thresholds, minimal costs, and heightened efficiency, thereby accelerating audit automation and saving audit cost.

Second, digital transformation fortifies corporate governance and effectively mitigates operational risks. Continuous business digitalization provides valuable insights for decision-making with less interference from short-sighted managers. For instance, enterprises can leverage digital platforms to predict and simulate external shocks, then proactively prepare for environmental uncertainties and potential threats [19]. Those approaches strengthen corporate risk tolerance and management capabilities, ultimately diminishing audit risks and associated audit fees. Based on the aforementioned analysis, the following hypothesis is proposed.

Hypothesis 3: Enterprise digital transformation negatively moderates the positive association between management myopia breaches and audit fees.

4. Research Design

4.1. Sample Selection and Data Sources

Our research sample includes all Chinese A-share firms listed on the Shanghai and Shenzhen Stock Exchange, spanning the years 2007 to 2022. The sample period starts in 2007 as it marks the implementation of novel enterprise accounting standards. The data of managerial myopia and digital transformation is derived from the Management Discussion and Analysis text (MD&A) via WinGo Textual Analytics platform. Other financial data are collected from the China Stock Market Accounting Research (CSMAR) database.

To enhance the representativeness and accuracy of results, we systematically exclude observations with missing values, financial enterprises, entities under special treatment (ST&*ST) and particular transfer (PT). The final sample consists of 36,963 firm-year observations for 3919 distinct firms. To mitigate the influence of outliers, we winsorize all continuous variables at the 1% and 99% levels.

4.2. Key variable measurement

4.2.1. Managerial Myopia

MD&A section within the annual report can effectively reflect managers' characteristics and future outlook of enterprises. Drawing inspiration from the study of Brochet et al. [2], we utilize a textual analysis methodology to measure managerial myopia. Employing a synthesis of lexicon approach, Chinese corpus construction, and Word2Vec machine learning, a seed set comprising 43 keywords indicative of managerial myopia is identified, including "within days", "pressure", "opportunity", "immediately". We calculate the proportion of the frequency of these identified terms to the overall word frequency in MD&A, and multiply this ratio by 100 to derive a robust indicator of managerial myopia.

4.2.2 Moderating variables

We employ analyst coverage (Analyst) and digital transformation (Digital) as moderating variables. The procedures to measure digital transformation is similar to those used in the managerial myopia. Drawing from prior studies [18,19], we establish a digital dictionary, calculate the proportion of digital-related words within the MD&A and multiplied it by 100. Additionally, we measure the analyst coverage using the natural logarithm of the sum of one plus the number of analysts following the firm.

All variables and their detailed measurements are defined in Appendix A.

Appendix A: Variable Description

Variables	Definition
LNAF	Natural logarithm of audit fees paid by the clients
Myopia	(Total word frequency of the myopia-related terms in the MD & A chapter of annual reports / Total word frequency) *100
Big 4	Equals 1 when the firm is audited by a Big 4 auditor, and 0 otherwise
Abroad	Equals 1 when the firm is audited by a oversea auditor, and 0 otherwise
Size	Natural logarithm of total assets
SOE	Equals 1 for state-owned firms, and 0 otherwise
Age	Natural logarithm of the number of years the firm has existed
Lev	Ratio of total liability to total assets
TRTA	Ratio of trade receivable to total assets
Inventory	Ratio of inventory to total assets
BM	Ratio of book value to market value of the equity
Board	Size of board, measured by natural logarithm of number of board members.
MAge	Average age of the management
MSalary	Average salary of the management
Balance	The shareholding ratio held by the second to tenth largest shareholder to the largest shareholder of the enterprise
Indep	Percentage of independent directors on the board
Digital	(Total word frequency of the myopia-related terms in the MD & A / Total word frequency) *100
Analyst	Analyst coverage, calculated as the natural logarithm of the sum of one plus the number of analysts following the company
SA	Financial constraints, measured by absolute value of SA index
CompA	Comparability of corporate accounting information, measured by similarity among firms in the mapping of economic events into financial statement information.
IC	Natural logarithm of internal control scores collected from DIB database
RiskTk	Corporate risk tolerance, measured by the three-year standard deviation of the ratio of EBITDA to total asset
HHI	Sum square of the ratio of each firm's main business revenue to the total main business revenue of the industry
Marketization	Marketization index of provinces
Firm	Dummy variable to control the firm effects
Industry	Dummy variable to control the industry effects
Year	Dummy variable to control the year effects

4.3. Empirical model

To investigate the influence of managerial myopia on audit fees, we construct the following regression model.

$$LNAF_{i,t} = \beta_0 + \beta_1 Myopia_{i.t} + \beta_2 Controls_{i.t} + \sum Year + \sum Ind + \sum Firm + \varepsilon_{i.t} \quad (1)$$

where i indexes the firm, t indexes time, and $\varepsilon_{i.t}$ refers to the random interference items. $LNAF_{i.t}$ signifies the natural logarithm of audit fees, and $Myopia_{i.t}$ represents the level of managerial myopia. $Controls_{i.t}$ denotes all relevant control variables. Firm, Year and Industry respectively capture firm, year and industry fixed effects. Standard errors are further specified based on the heteroskedasticity-robust approach.

To test the moderating effect of analyst coverage and digital transformation, the econometric models are specified as follows:

$$LNAF_{i,t} = \beta_0 + \beta_1 Myopia_{i.t} + \beta_2 Moderator_{i.t} + \beta_3 Controls + \sum Year + \sum Ind + \sum Firm + \varepsilon_{i.t} \quad (2)$$

$$LNAF_{i,t} = \beta_0 + \beta_1 Myopia_{i.t} + \beta_2 Moderator_{i.t} + \beta_3 Moderator_{i.t} \times Myopia_{i.t} + \beta_4 Controls + \sum Year + \sum Ind + \sum Firm + \varepsilon_{i.t} \quad (3)$$

where $Modiator_{i.t}$ serves as the moderating variable, representing digital transformation (Digital) and Analyst coverage (Analyst) respectively. $Moderator_{i.t} \times Myopia_{i.t}$ indicates the moderating effect of analyst coverage (Analyst) and digital transformation (Digital). We anticipate the coefficient β_2 to be negative for hypothesis 2 and to be positive for hypothesis 3.

5. Empirical Results

5.1. Descriptive Statistics

Table 1 presents the descriptive statistics of the main variables. LNAF exhibits a mean of 13.81, a median of 13.71, and a standard deviation of 0.71, reflecting a large variation in audit fees across our observations. The average Myopia value is 0.091, the median is 0.073, and the standard deviation is 0.078. These results suggest that managerial myopia has sufficient variability and is a common phenomenon in most companies. Generally, the statistics for the control variables are consistent with previous research examining audit fees in China.

Table 1. Descriptive statistics

Variable	N	Mean	SD	Min	Median	Max
LNAF	36963	13.81	0.710	12.10	13.71	16.42
Myopia	36963	0.091	0.078	0	0.073	0.635
Size	36963	22.21	1.289	19.47	22.03	26.50
Age	36963	2.889	0.347	1.386	2.944	3.611
Lev	36963	0.434	0.203	0.039	0.429	0.926
TRTA	36963	0.117	0.101	0	0.0950	0.507
Inventory	36963	0.144	0.134	0	0.113	0.770
BM	36963	0.619	0.251	0.057	0.614	1.252
SOE	36963	0.388	0.487	0	0	1
Big4	36963	0.063	0.243	0	0	1
Abroad	36963	0.026	0.159	0	0	1
Board	36963	8.592	1.724	0	9	18
MAge	36963	49.24	3.182	40.18	49.29	57.82
MSalary	36963	15.27	0.781	12.22	15.27	17.59
Balance	36963	0.919	0.786	0.024	0.708	4.307
Indep	36963	37.51	5.378	25	35.71	60

5.2. Baseline regression Analysis

Table 2 reports the regression results pertaining to the association between managerial myopia and audit fees. Columns (1) - (3) progressively introduce additional control variables. Specifically, Column (1) displays the outcomes without any control variables. Columns (2) incorporate industry and year fixed effects, along with the remaining control variables, and Columns (3) further include firm fixed effects. In all columns, the coefficients β_1 associated with Myopia are consistently positive and statistically significant, signifying that managerial myopia exerts a positive impact on audit fees. Precisely, in column (3), for each one standard deviation increase in managerial myopia, there is a notable 5% upswing in firms' audit fees, providing robust support for Hypothesis 1.

5.3. Moderating effect of analyst coverage and digital transformation

The empirical outcomes of moderating effect based on Eq. (2) and Eq. (3) are listed in Table 3.

Regarding the moderating effect of analyst coverage, results in Column (1) demonstrates a positive association between Myopia and LNAF at the 10% significance level. Meanwhile, the interaction term (Myopia*Analyst) displays a significant positive correlation at the 5% level, with a coefficient of 0.034, which implies that the positive impact of managerial myopia on audit fee is amplified by higher analyst coverage. This outcome aligns with the short-term performance pressure view and supports Hypothesis 2.

Regarding the moderating effect of digital transformation, the coefficients of Myopia in Columns (3) are significantly positive at 5% level, which is consistent with Hypothesis 1. Notably, in Column (4), the interaction term (Myopia*Digital) is negatively linked to LNAF at 1% significance level, with a regression coefficient of -0.071. These results indicates that overall effect of myopia on audit fees is attenuated with an increase in digital transformation, thus validly verifying Hypothesis 3.

Table 2. Regression results of managerial myopia on audit fees

Variables	(1) LNAF	(2) LNAF	(3) LNAF
Myopia	0.665***	0.198***	0.050**
	(12.695)	(6.820)	(2.256)
Big4		0.556***	0.331***
		(49.279)	(19.124)
Lev		0.255***	0.167***
		(19.058)	(10.801)
Abroad		0.595***	0.358***
		(30.173)	(16.403)
Size		0.336***	0.305***
		(107.336)	(65.740)
SOE		-0.063***	0.033***
		(-11.779)	(3.488)
Age		0.047***	0.041
		(6.142)	(1.637)
TRTA		0.149***	0.129***
		(6.062)	(4.099)
Inventory		-0.152***	-0.110***
		(-7.154)	(-4.731)
BM		-0.084***	-0.025**
		(-7.022)	(-2.270)
Board		0.000	0.011***
		(0.220)	(5.906)
MAge		0.002**	-0.002*
		(2.030)	(-1.842)
MSalary		0.043***	0.028***
		(11.535)	(6.367)
Balance		0.019***	0.028***
		(6.692)	(7.539)
Indep		0.001	0.001
		(1.264)	(1.589)
Constant	13.746***	5.324***	6.320***
	(2,429.110)	(75.171)	(51.492)
Firm FE	NO	NO	YES
Industry FE	NO	YES	YES
Year FE	NO	YES	YES
N	36,963	36,962	36,465
Adjusted R^2	0.005	0.702	0.899

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 3. Regression results of the moderating effect

VARIABLES	Analyst Coverage		Digital Transformation	
	(1) LNAF	(2) LNAF	(3) LNAF	(4) LNAF
Myopia	0.043*	0.047**	0.051**	0.027
	(1.932)	(2.072)	(2.275)	(1.169)
Analyst	-0.019***	-0.018***		
	(-8.905)	(-8.796)		
Myopia*Analyst		0.034**		
		(2.097)		
Digital			-0.002	-0.004
			(-0.923)	(-1.313)
Myopia* Digital				-0.071***
				(-2.962)
Control	YES	YES	YES	YES
Constant	6.073***	6.080***	6.290***	6.309***
	(47.991)	(48.029)	(50.554)	(50.579)
Firm FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
N	36,465	36,465	35,734	35,734
Adjusted R^2	0.899	0.899	0.898	0.898

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

5.4. Robustness Test

5.4.1. Alternative measure of managerial myopia

Following Chen et al. [6], we convert the measurement of Myopia into dummy variables indicating whether R&D expenditure is declined. The results are documented in column (1) of Table 4 (β_1 = 0.019, p < 0.01), which consistently align with the initial conclusion.

5.4.2. Excluding foreign equity participation samples

Since companies with overseas investors are expected to comply with stricter financial reporting standards, its comparability is relatively poor. To mitigate potential interference, we exclude samples of foreign equity participation. Our baseline results are still robust as evidenced in column (2) of Table 4, where the positive impact of managerial myopia on audit fees remains statistically significant at 1% level (β_1 = 0.058, p < 0.05).

5.4.3 Excluding the data in special years

The COVID-19-induced shocks have engendered substantial disruptions in corporate production and operations, thereby introducing significant bias to samples. To alleviate this concern, we eliminate samples from 2020 to 2022 and repeat the regression. Column (3) in Table 4 furnishes the results where the coefficient of Myopia is 0.061 and is significantly positive at the 5% level. The main findings remain robust even after considering additional industrial control variables.

Table 4. Test of robustness

VARIABLES	(1) LNAF	(2) LNAF	(3) LNAF
Myopia		0.058**	0.061**
		(2.431)	(2.491)
Decline	0.019***		
	(5.643)		
Control	YES	YES	YES
Constant	6.304***	6.361***	6.222***
	(39.859)	(47.972)	(40.969)
Firm FE	YES	YES	YES
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
N	27,029	32,139	25,719
Adjusted R^2	0.909	0.896	0.903

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

5.4.4 Endogeneity test: 2SLS regression

To further address endogeneity issues, we further exploit instrumental variable and two-stage least squares (2SLS) regression as an additional test. The instrumental variable (IV) is constructed by the average level of managerial myopia observed in other companies in the same province and year. This regional measure is unlikely to directly affect a firm's audit fees, but might exert influence on their managerial behaviors [11], satisfying correlation and exogenous conditions.

Table 5 presents the results of 2SLS regressions. The first-stage regression results in column (1) reports that the coefficient of IV is 0.299, demonstrating a significant positive correlation between Myopia and IV. This validity is further reinforced by under-identification, weak identification and weak instrumental variable test. In the second stage, as shown in columns (2), the coefficient of Myopia remains significantly positive at the 1% level, confirming the robustness of empirical results.

Table 5. Results of 2SLS regression

VARIABLES	First-stage	Second Stage
	(1)	(2)
	Myopia	LNAF
Myopia		1.647***
		(3.620)
IV	0.299***	
	(7.783)	
Control	YES	YES
Constant	0.087***	
	(2.832)	
Firm FE	YES	YES
Industry FE	YES	YES
Year FE	YES	YES
First-stage F-statistic	60.58***	
Kleibergen-Paap rk LM	67.35***	67.346***
Anderson-Rubin Wald test	15.83***	
N	36,464	36,464
Adjusted R^2	0.342	0.069

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

6. Additional analyses

6.1. Mechanism analysis

The above regression results have provided solid evidences that managerial myopia significantly increases the firms' audit fees. Combined with the baseline model (1), we further constructed Models (4) to examine its influencing mechanism. The regression results of the mechanism analysis are presented in Table 6.

$$Mediator_{i.t} = \gamma_0 + \gamma_1 Myopia_{i.t} + \gamma_2 Controls_{i.t} + \sum Year + \sum Ind + \sum Firm + \varepsilon_{i.t} \quad (4)$$

where $Mediator_{i.t}$ is the mediator variable and represents the financing Constraints (SA), accounting information comparability (CompA), internal control quality (IC). If both γ_1 and α_2 are significant, we consider there exists a mediating effect.

6.1.1. Financing Constraints mechanism

Since myopic managers is inclined to prioritize immediate profit over firms' sustainable practice, adverse signals regarding uncertain profitability, solvency and ongoing viability may trigger investor concerns, eventually culminating in higher financing costs [6]. That further elevates liquidity pressure earnings volatility with elevated financial distress risks, where higher audit fees are demanded for risk compensation. We calculated the absolute value of SA index as an indicator of financing constraints (SA), where a larger absolute value of SA implies greater financing constraints.

Column (1) shows a statistically significant positive coefficient of Myopia at 5% level. Similarly, the coefficient of Myopia remains significantly positive at the 5% level in columns (2). This indicates that managerial myopia can significantly exacerbate corporate financing constraints, which verifies the existing of financing constraints mechanism.

6.1.2. Accounting information comparability mechanism

In the section of theoretical analysis, we argue that myopic managers tend to strategically disclose favorable information and manipulate financial statements, deliberately diminishing the accounting information comparability in contribution judgements [12]. Such misconducts exacerbate information asymmetry and necessitates more audit procedure inputs, consequently leading to escalated audit fees. We measure the comparability of corporate accounting information (CompA) as the similarity across companies in converting the economic events into financial statement information. A higher CompA value indicates greater financial statement comparability.

In Column (3), a significantly negative coefficient of Myopia at 1% level indicates that managerial myopia indeed contributes to lower accounting information comparability. Therefore, accounting information comparability is an effective mediator in linking the managerial myopia to audit fees.

6.1.3. Internal control quality mechanism

Grounded in prior theoretical analysis, a myopic emphasis on short-term goals is prone to distract managers from the establishment of comprehensive internal controls, accompanied by reduced investment. Concurrently, the myopic focus may stimulate opportunistic behaviors and elevate fraud risk, collectively undermining the effectiveness of internal control and raising audit risk premium [7]. To quantify internal control quality, we employ the natural logarithm of internal control index (IC) sourced from DIB database. The greater the IC value, the better the internal control quality.

As evident from Column (4) in Table 6, a significant negative regression coefficient of -0.064 is observed between the Myopia and IC at the 1% level, implying managerial myopia could erode effective internal controls. Hence, the mechanism role of internal control is demonstrated.

Table 6. Results of the mechanism analysis

	Baseline	Financing Constraints	Information Comparability	Internal control
VARIABLES	(1)	(2)	(3)	(4)
	LNAF	SA	CompA	IC
Myopia	0.050**	0.013**	-0.003***	-0.064***
	(2.256)	(2.265)	(-3.664)	(-4.682)
Control	YES	YES	YES	YES
Constant	6.320***	3.480***	-0.051***	5.608***
	(51.492)	(84.681)	(-5.863)	(81.084)
Firm FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
N	36,465	36,465	21,951	35,569
Adjusted R^2	0.899	0.949	0.496	0.233

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

6.2. Cross-sectional analyses

In this section, we further explore whether the association between managerial myopia and audit fees varies across different levels of firm, industrial, and market characteristics. The results of the grouping regression are reported in Table 7.

6.2.1 Corporate risk tolerance

We measure risk tolerance (RiskTk) by the three-year profitability volatility, with heightened volatility indicating a greater risk tolerance. In periods of elevated profitability volatility, management is incentivized to adopt more myopic and opportunistic behavior to uphold satisfactory profits amidst uncertainties. This is primarily propelled by the link between compensation and short-term indicators, coupled with external market pressures, collectively contributing to elevated audit fees.

Based on the median volatility, we split the sample into High risk tolerance and Low risk tolerance groups. The coefficient of Myopia (0.052) is significantly positive at a 10% level in column (1), but insignificant in column (2), which suggests a more evident effect of managerial myopia on audit fees among firms with low risk tolerance.

6.2.2 Industrial competition degree

Prior literature underscores that intense product market competition will demand higher financial reporting quality and has the potential to ameliorate agency problems, thus decreasing audit risk assessments and corresponding fees [20]. Meanwhile, managers are compelled to embrace forward-looking strategies to secure market leadership and sustain competitiveness amidst the swiftly evolving business landscape. We utilize Herfindahl–Hirschman Index (HHI) to quantify the degree of industrial competition, where a lower HHI indicates a more competitive environment.

We divide the sample enterprises into High Competition and Low Competition according to the median of HHI. As evident from Columns (3) and (4), the significantly positive coefficient (0.063) of Myopia is exclusively observed for firms experiencing low competition, implying the inhibitory effect of market competition on managerial myopia.

6.2.3 Marketization degree

A high degree of marketization signifies fairer market competition, well-established institutional environment, and effective governance, which collectively mitigates potential myopic behaviors [21].

We measured the marketization level (Marketization) using provincial marketization index and categorized the samples into high and low marketization groups based on median value. As depicted in columns (5) and (6), the coefficients of Myopia (0.065) exhibit a significantly positive relationship in firms with low marketization but lack significance in firms with high marketization.

Table 7. Results of cross-sectional analyses

VARIABLES	High Risk Tolerance	Low Risk Tolerance	High Competition	Low Competition	High Marketization	Low Marketization
	(1)	(2)	(3)	(4)	(5)	(6)
	LNAF	LNAF	LNAF	LNAF	LNAF	LNAF
Myopia	0.052*	0.027	0.045	0.063**	0.035	0.065**
	(1.653)	(0.810)	(1.415)	(2.088)	(1.054)	(2.119)
Control	YES	YES	YES	YES	YES	YES
Constant	6.748***	5.372***	6.488***	6.508***	6.244***	6.482***
	(40.007)	(24.421)	(34.933)	(33.223)	(30.444)	(38.629)
Firm FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
N	19,764	15,801	17,151	18,424	15,873	20,097
Adjusted R^2	0.887	0.922	0.898	0.914	0.908	0.899

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

7. Summary and Conclusion

This study investigates the impact of managerial myopia on audit fees based on a sample of 3919 Chinese A-share listed companies over the period from 2007 to 2022. Our findings present compelling empirical evidence that managerial myopia will lead to a substantial augmentation in firms' audit fees. Moreover, the moderating effect analysis underscores that analyst coverage accentuates this positive relationship, while digital transformation dampens it. These results remain robust across a battery of robustness tests, encompassing alternative managerial myopia measures, exclusion of samples involving foreign equity participation, omission of samples during the COVID-19 pandemic, and

instrumentation of managerial myopia with the average regional myopia. Further exploration into the underlying mechanisms elucidates that managerial myopia significantly amplifies audit fees primarily by exacerbating financial constraints, eroding the comparability of accounting information, and compromising the quality of internal controls. Through a meticulous exploration of cross-sectional analysis, our study reveals that the impact of myopia on audit fees is particularly concentrated among companies with higher risk tolerance, diminished industrial competition, and a lower level of marketization.

This study endeavors to illuminate the nexus between managerial myopia and audit fees. Whereas prior studies predominantly focused on managerial demographic factors, we contribute to the audit fee research by investigating a hitherto unexplored determinant pertaining to short-term orientation traits. Simultaneously, our paper extends the literature on the economic consequence of managerial myopia to the realm of external auditors, and concurrently examines how digital transformation moderates this impact. As a corollary, we advocate for enterprises to proactively strengthen their internal control mechanisms. This fortification, complemented with the stabilizing influence of the governmental "visible hand," serves as a collaborative strategy to jointly curtail managerial myopic behaviors.

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