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Common institutional ownership and analyst earnings forecasts

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ABSTRACT

This research investigates the impact of shared institutional ownership on the accuracy of analysts' predictions. Drawing from theoretical frameworks, we have formulated and empirically tested our research hypotheses. The results indicate a negative correlation between shared institutional ownership and the precision of analysts' forecasts. Additionally, peer pressure has been found to mediate this relationship. Furthermore, ownership type has been identified as an intermediary factor, with state-owned enterprises exhibiting a more significant negative effect.

1. Introduction

As global financial markets continue to evolve, institutional investors have steadily gained significance. The widespread occurrence of common institutional ownership—wherein multiple institutional investors jointly hold equity in the same firm—has sparked considerable interest among scholars. With the advancement of markets and the expansion of institutional investors, this shared ownership pattern has become increasingly prevalent, thereby magnifying its effects on market structure, corporate governance practices, and even analysts' projections.

Li and Liu (2023) shared that institutional ownership positively influences analysts' predictions. Institutional investors often possess expert investment skills and ample resources, enabling them to impact corporate disclosures favorably. This, in turn, elevates both the quality and quantity of information accessible to analysts. Jang et al. (2022) reveal that mutual institutional ownership can be used as an effective information screening mechanism, which can improve the information efficiency of the overall investment portfolio by filtering out the investors with weak information processing ability. Information efficiency of the overall portfolio. There is a positive correlation between this screening and processing advantage and the accuracy of analysts' forecasts (Miller et al., 2021). In addition, co-institutional investors are able to use their voting power and influence to influence corporate governance structures and management behavior positively, providing analysts with a more stable and transparent forecasting environment (Cheng et al., 2020). Scholars such as Sakaki et al. (2021) and Tsang et al. (2023) have delved deeper into the potential ramifications of shared institutional ownership on analysts' predictions from a corporate governance lens. They contend that institutional investors, through active participation in corporate governance and fostering portfolio diversification, can mitigate firm risk and elevate the company's overall value. This governance impact, they argue, is pivotal for the precision of analysts' forecasts. In a related vein, Athira and Lukose (2023) observed a positive correlation between shared institutional ownership and firm value, suggesting that institutional investors' ability to enhance corporate governance and reduce equity risk via portfolio diversification strategies offers fresh insights into the analysts' forecasting process (Vo et al., 2021). However, some academics also take a more cautious stance. They argue that institutional investors, in pursuit of short-term profits, might undermine corporate governance effectiveness and exacerbate earnings management

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Table 1
List of variable definitions.

Category	Name	Symbols	Definition
explained variables	Analyst Forecast Accuracy	Accur	The absolute value of the difference between the mean analyst forecast EPS and the actual value of EPS divided by the opening share price and multiplied by −1
explanatory variables	Existence of common institutional ownership	Cio1	Whether two or more institutional investors hold the listed company in the same industry with at least 5 percent of the shares, yes 1, no 0
	Degree of common institutional ownership linkages	Cio2	Calculate the number of everyday institutional investors owned by the company, add one, and take the natural logarithm.
control variables	Institutional investors' shareholding	Institution	Shares held by institutional investors as a percentage of total shares
	Enterprise size	Size	Measured by the natural logarithm of total assets
	Gearing	Lev	The ratio of total liabilities to total assets
	return on assets	ROA	The ratio of net profit to total assets
	Age of business	Age	Number of years the company has been listed
	Shareholding ratio of the largest shareholder	Top1	Proportion of shares held by the largest shareholder to total shares
	Board size	Board	Natural logarithm of the number of board members
	Proportion of independent directors	Independent	Percentage of independent directors on the board
	the integration of the two positions	Dual	Depending on whether the chairman and general manager are the same person, 1 for yes, 0 for no

practices (Chen et al., 2023; Li & Ji, 2021). Such behaviors undoubtedly complicate analysts' forecasting tasks, as they rely on accurate and reliable information to make informed predictions (Mishra, 2022). Lu & Wang's (2024) study further corroborates this, finding that firms with shared institutional ownership are prone to engage in surplus management. This might stem from institutional investors' diminished focus on corporate governance as they prioritize short-term gains. Such practices not only distort the company's actual financial standing and operational performance but also pose challenges to analysts' forecasting accuracy. Beyond these viewpoints, other scholars have approached the relationship between shared institutional ownership and analysts' forecasts from alternative perspectives. For instance, Li et al. (2023) posit that shared institutional ownership might lead to the "herd effect," whereby the convergence of investment decisions among multiple institutional investors results in the homogenization of market information, potentially impeding analysts' forecasting independence. Meanwhile, Ni et al., 2023 highlight the influence of joint institutional ownership on analysts' professional reputation and conflict of interest, which can indirectly shape their forecasting behavior. These diverse perspectives collectively enrich our comprehension of the intricate relationship between shared institutional ownership and analyst forecasting.

This study aims to comprehensively explore the impact of common institutional ownership on analysts' forecasting accuracy and its intrinsic mechanism through in-depth empirical analyses. The study mainly includes the following aspects: first, clarifying the direct association between common institutional ownership and analyst forecast accuracy; second, revealing the mediating role of peer pressure in this relationship; and finally, analysing the moderating role of the nature of property rights on the relationship between common institutional ownership and analyst forecast accuracy. The innovations of the study are mainly reflected in the following: firstly, a more complete theoretical framework is constructed, which provides a new perspective for understanding the impact of common institutional ownership on analysts' forecasting accuracy; secondly, a more complex econometric model is adopted, which effectively identifies the mediating and moderating roles of peer pressure and the nature of property rights; and thirdly, empirical research is carried out based on the data of the Chinese market, which provides a valuable supplement for international comparisons.

Table 2
Descriptive statistics.

variables	obs	mean	std	min	max
Accur	32533	0.385	0.733	0.001	4.860
Cio1	32533	0.063	0.243	0.000	1.000
Cio2	32533	0.046	0.178	0.000	1.554
Institution	32533	6.721	7.118	0.000	33.011
Size	32533	21.934	1.126	19.973	25.513
Lev	32533	0.385	0.197	0.046	0.844
ROA	32533	0.047	0.048	−0.147	0.200
Age	32533	10.255	7.384	0.000	27.000
state	32533	0.106	0.307	0.000	1.000
Top1	32533	0.331	0.141	0.084	0.712
Board	32533	2.228	0.167	1.791S	2.639
Independent	32533	0.376	0.053	0.333	0.571
Dual	32533	0.320	0.467	0.000	1.000

Table 3
Common institutional ownership and analysts' forecasts.

	(1)	(2)
Cio1	−0.357*** (−3.281)	
Cio2		−0.218** (−2.547)
Institution	−0.123** (−2.314)	−0.109*(-1.947)
Size	0.184*** (3.458)	0.167*** (2.876)
Lev	−0.276*** (−4.127)	−0.249*** (−3.874)
ROA	0.458*** (5.723)	0.423*** (5.281)
Age	−0.037*(-1.745)	−0.032*(-1.689)
Top1	0.231** (2.197)	0.209** (2.284)
Board	−0.082*(-1.897)	−0.074*(-1.782)
Independent	0.123** (1.987)	0.112* (1.876)
Dual	−0.154*** (−2.987)	−0.141*** (−2.874)
Cons	0.684*** (4.573)	0.652*** (4.281)
Time effect & industry effect	yes	yes
N	32533	32533
R^2	0.451	0.524

The main findings of this study include: first, there is a significant negative correlation between common institutional ownership and analysts' forecast accuracy, i.e., the higher the degree of common institutional ownership, the lower the analysts' forecast accuracy; second, peer pressure plays a mediating role in the relationship between common institutional ownership and analysts' forecast accuracy, i.e., common institutional ownership indirectly reduces analysts' forecast accuracy by enhancing peer pressure; third, the property suitable nature has a moderating effect on the relationship between joint institutional ownership and analyst forecast accuracy. Specifically, the negative effect of joint institutional ownership on analyst forecast accuracy is more significant in state-owned enterprises. These findings not only validate the theoretical hypotheses of this study but also provide new empirical evidence for understanding the relationship between joint institutional ownership and analysts' forecast accuracy.

The value and significance of this study are mainly reflected in the following aspects: firstly, by revealing the impact of common institutional ownership on analysts' forecasting accuracy and its internal mechanism, it provides a new perspective for understanding the information dissemination mechanism of the financial market and enhancing the efficiency of the market; secondly, by identifying the intermediary and moderating roles of the peer pressure and the nature of the property rights, it provides the effective market regulatory policies and corporate governance strategies with a scientific basis; finally, the empirical study based on the Chinese market provides a valuable supplement to international comparisons and enriches the cross-country research literature in this area.

2. Theoretical analysis and research hypothesis

In modern financial markets, the efficiency of information flow and processing is crucial to market effectiveness. Analysts, as professional information intermediaries, main task is to conduct in-depth research and forecasts on the financial conditions, business strategies, and future prospects of listed companies so as to provide investors with valuable investment advice (Han et al., 2018). However, in recent years, more and more studies have shown that analysts' forecasts are not always objective and neutral but may be affected by a variety of external and internal factors. Among them, common institutional ownership has gradually attracted academic attention as an important influencing factor. Common institutional ownership refers to the simultaneous holding of shares in the same

Table 4
Intermediation effects of peer forces.

	(1)	(2)	(3)	(4)	(5)	(6)
	Accur	Group_num	Accur	Accur	Group_num	Accur
Cio1	−0.321*** (−3.124)	0.457*** (4.289)	−0.214** (−2.087)			
Cio2				−0.211** (−2.124)	0.347** (2.289)	−0.144* (−1.887)
Group_num			−0.158* (−1.876)			−0.113** (−2.276)
control variable	yes	yes	yes	yes	yes	yes
Cons	0.612*** (3.891)	0.387** (2.547)	0.543*** (3.458)	0.742** (2.191)	0.457* (1.747)	0.833*** (3.478)
Time effect & industry effect	yes	yes	yes	yes	yes	yes
N	32533	32533	32533	32533	32533	32533
R2	0.498	0.387	0.512	0.412	0.343	0.512

Table 5
Robustness test.

	(1) Replacement of sample intervals	(2) Replacement of explanatory variables
Cio1	−0.201** (−2.103)	
Cio1_7		−0.163* (−1.729)
control variable	Yes	Yes
Cons	0.651*** (4.128)	0.637*** (3.987)
Time effect & industry effect	Yes	Yes
N	32533	32533
R2	0.482	0.497

listed company by multiple institutional investors. This kind of shareholding structure is not uncommon in modern financial markets, especially for those listed companies with large scale and stable performance. When multiple institutional investors jointly hold shares in a company, a common interest association is formed among them, which may have a far-reaching impact on the company's business decisions, information disclosure, and market performance.

From the perspective of information economics, the influence of common institutional ownership on the precision of analysts' forecasts can be deeply understood through information asymmetry and conflict of interest. Firstly, information asymmetry, a core issue in financial markets, is exaggerated in the context of common institutional ownership. Multiple institutional investors sharing ownership in a company create unique channels for information exchange (Chen et al., 2020). These investors might obtain privileged insights through exclusive discussions, joint research, and industry gatherings. Such privileged information often escapes external analysts and encompasses undisclosed financials, strategic shifts, and other decision-making factors (Yu et al., 2024). With this access to information, institutional investors hold a distinct advantage in evaluating investment options, enabling them to make sharper decisions (Sakawa et al., 2022). In contrast, external analysts who need access to this private information face an informational disadvantage. Their reliance on public data and limited research resources increases forecast uncertainty and the potential for errors (Ni & Yin, 2023). Thus, information asymmetry significantly contributes to reduced forecast accuracy. Furthermore, conflict of interest is another crucial factor affecting analysts' forecasting accuracy. Complex and often subtle interests arise between analysts' organizations and institutional investors, stemming from various business transactions such as investment banking and asset management services (Hu et al., 2022). A potential conflict of interest arises when analysts' institutions provide these services to institutional investors. This conflict might influence analysts to deviate from objectivity and neutrality in their forecasts (Liao et al., 2022). To maintain relationships with institutional investors, analysts may issue more optimistic or investor-friendly forecasts (Liu et al., 2023). For instance, when institutional investors hold substantial stakes in a company, they may desire a higher share price rise for higher returns. In such cases, analysts might face pressure or temptation to issue overly optimistic forecasts, catering to institutional investors' interests (Xu & Jiang, 2024). This conflict of interest undoubtedly undermines the accuracy of analysts' forecasts, distorting their behaviour and compromising their objectivity and neutrality.

The impact of common institutional ownership on analysts' forecast accuracy is dynamic and subject to various moderating factors. Chief among these is the concept of "peer power" – the sway exerted by firms within the same industry upon a target company. When several institutional investors concurrently own stakes in an industry's target firm, they can leverage their collective clout and resources to either intensify pressure or bolster support for that enterprise (Hu et al., 2021). This peer influence potentially reshapes the target firm's operating milieu and outcomes, injecting analysts' predictions with additional layers of intricacy and uncertainty.

Furthermore, the nature of property rights emerges as a pivotal moderating factor, particularly in economies undergoing transition like China. Here, state-owned enterprises (SOEs) and private ventures diverge sharply in terms of their core objectives, governance frameworks, and market contexts (Liang et al., 2022). SOEs typically shoulder heavier social mandates and policy imperatives, often encountering government interference in their strategic choices. Conversely, private entities prioritize market-driven growth and profitability, enjoying greater flexibility and autonomy in decision-making. These disparities in ownership structures can lead to varied impacts of common institutional ownership across enterprise types. For instance, within SOEs, such ownership might reflect stronger political ties or policy alignment, whereas in private outfits, it could be more profit- and market-oriented. These diverse forces can further cloud analysts' ability to forecast accurately.

Table 6
Analysis of property rights heterogeneity.

	(1)	(2)
Cio1	−0.295*** (3.102)	–
Cio1*State	−0.187** (2.458)	–
Cio2	–	−0.174*(1.873)
Cio2*State	–	−0.132** (2.447)
control variable	yes	yes
Cons	0.542*** (4.127)	0.487*** (3.895)
Time effect & industry effect	yes	yes
N	32533	32533
R2	0.478	0.435

Against this backdrop, the study posits the following research hypotheses.

H1a. A negative correlation exists between the degree of common institutional ownership and the precision of analysts' forecasts.

H1b. The strength of the linkage among common institutional investors is inversely related to the accuracy of analysts' projections.

H2. Peer industry power serves as a mediating variable between common institutional ownership and analyst forecast accuracy, with the former diminishing the latter by amplifying peer influence.

H3. The nature of property rights moderates the relationship between common institutional ownership and analyst forecast accuracy, with the negative impact being more pronounced in SOEs compared to non-state-owned entities.

3. Study design

3.1. Definition of variables

Explained variable: analyst forecast accuracy (Accur). We measure analyst forecast accuracy by calculating the absolute value of the difference between the mean of analysts' forecasts of firms' EPS and actual EPS. To control for heterogeneity across firms, we further normalize this difference using beginning-of-year stock prices. In addition, we multiply by −1 to take the opposite of the analyst surplus forecast error to ensure that larger Accur values correspond to higher forecast accuracy. The formula is shown below:

$$\mathrm{Accur}_{i,t} = (-1)\left|\mathrm{Mean}\left(\mathrm{Feps}_{j,i,t}\right) - \mathrm{Meps}_{i,t}\right| \Big/ \mathrm{Price}_{i,t-1} \tag{1}$$

Where $\mathrm{Feps}_{j,i,t}$ represents analyst j's EPS forecast for firm i in year t, $\mathrm{Meps}_{i,t}$ represents the firm's actual EPS in year t, and $\mathrm{Price}_{i,t-1}$ represents the firm's beginning stock price in year t. $\mathrm{Accur}_{i,t}$ represents the accuracy of the analyst's forecast for firm i in year t. The larger the value, the more accurate the analyst's forecast is. Accur, on the other hand, represents the accuracy of the analyst's forecast for firm i in year t. The larger the value, the more accurate the analyst's forecast.

Explanatory variables: This study delves into the multifaceted nature of common institutional ownership, encapsulating two distinct dimensions. Firstly, the mere existence of common institutional ownership (designated as Cio1) is examined. This metric assesses whether a given listed company is owned by institutional investors who hold a minimum of two shares in the same industry, with a shareholding ratio not falling below 5%. For clarity, a binary system is employed, whereby a value of 1 signifies the presence of such ownership, and 0 denotes its absence. Secondly, the study quantifies the degree of standard institutional ownership linkage (labeled as Cio2). This measurement is derived from the count of institutional investors that are commonly owned by the company, with the natural logarithm applied after incrementing the count by 1. Notably, all these indicators are grounded in quarterly data. If, during any quarter of the year, a company can be linked to a typical institutional investor, it is deemed to have maintained that link throughout the year. The annual indicator, therefore, is formulated by averaging the quarterly data points.

Control variables. Based on existing research, this study has selected a comprehensive set of control variables to thoroughly examine the impact of shared institutional ownership on analysts' predictions while mitigating potential interference from unrelated factors. These variables encompass corporate attributes and governance frameworks, with notable inclusions such as the level of institutional investor engagement (labeled as "Institution"), measured by their ownership share; "Size," considering the company's total assets on a logarithmic scale; "Lev," representing the ratio of total liabilities to total assets for financial leverage insights; "Return on Assets" (ROA) to capture profitability; and the firm's "Age" since public listing to account for maturity-related impacts on projections.

Furthermore, this study incorporates the "Management Expense Ratio" (Mfee) to reflect management efficiency, "Top1 Shareholding" (Top1) to highlight ownership concentration, "Shrz" to represent the power balance among shareholders, "Board" size to address the influence of decision-making bodies, the "Independent" variable to gauge board independence, and finally, "Dual" as a binary indicator of the combination of chairman and general manager roles, reflecting leadership structure nuances. Detailed definitions and valuation methodologies for these variables are outlined in Table 1.

3.2. Model construction

In order to test whether there is a direct effect of common institutional ownership on the accuracy of analysts' forecasts, a benchmark model is constructed as shown in equation (2):

$$\mathrm{Accur}_{i,t} = \beta_0 + \beta_1 \mathrm{Cio}_{i,t} + \beta_2 \mathrm{Control}_{i,t} + \epsilon_{i,t} \tag{2}$$

In Equation (2), $\mathrm{Accur}_{i,t}$ denotes analyst forecast accuracy; $\mathrm{Cio}_{i,t}$ represents common institutional ownership; and $\mathrm{Control}_{i,t}$ denotes a set of control variables. The subscript t denotes the year, i denotes the firm, and ϵ is the random error term.

In order to explore more deeply whether there is an indirect effect of common institutional ownership on the accuracy of analysts' forecasts and to consider the role of different industry forces in this, this paper constructs a mediation effects model as shown in Equation (3) and Equation (4):

$$\mathrm{Group\_num}_{i,t} = \alpha_0 + \alpha_1 \mathrm{Cio}_{i,t} + \alpha_2 \mathrm{Control}_{i,t} + \varepsilon_{i,t} \tag{3}$$

$$Accur_{i,t} = \alpha_0 + \alpha_1 Cio_{i,t} + \alpha_2 Cio_{i,t} * Group\_num_{i,t} + \alpha_3 Control_{i,t} + \varepsilon_{i,t} \quad (4)$$

Where $Group\_num_{i,t}$ denotes the mediator variable peer power, and $Cio_{i,t}$*$Group\_num_{i,t}$.

The combined effect of common institutional ownership and peer power, as represented by their interaction term, serves to uncover the subtle influence of peer power on analysts' ability to forecast accurately. The central aim of this study is to examine the statistical significance of the α1 coefficient in Equation (3) alongside the α2 coefficient in Equation (4). Should both coefficients prove to be significant, it would provide evidence that the power wielded within peer industries plays a mediating role in the relationship between shared institutional ownership and the precision of analysts' forecasts.

3.3. Data sources

The study focuses on publicly traded companies listed on the Shanghai and Shenzhen stock exchanges in China from 2009 to 2022. The selection criteria for the sample are as follows: (1) excluding companies engaged in financial services, insurance, and securities, as well as those classified as ST and *ST; (2) eliminating companies with incomplete data sets; and (3) applying Winsor2 to adjust all company-level continuous variables at the 1% and 99% quantiles. After these rigorous screenings, the final dataset comprises 32,533 yearly observations sourced from the CSMAR database.

3.4. Descriptive statistics

We can draw the following inferences after reviewing the descriptive statistics presented in Table 2. Regarding analyst forecast accuracy (Accur), the average stands at 0.385, but the standard deviation, which is 0.733, points to notable variations in accuracy across different observations. The mean value of Common Institutional Ownership (Cio1) is 0.063, signifying that, on average, approximately 6.3% of the companies in the sample share a common institutional ownership. The average degree of joint institutional ownership (Cio2) is relatively low, at 0.046. Turning to the control variables, the mean institutional ownership (Institution) value is 6.721%. However, a considerable standard deviation of 7.118 highlights substantial disparities in the percentage of institutional ownership among different companies. The average firm size (Size) is 21.934, indicating a relatively narrow dispersion in the overall distribution. The mean gearing ratio (Lev) stands at 38.5%, while the average return on assets (ROA) is 4.7%, suggesting some disparities in the financial structures of the sampled companies. The average age of the companies (Age) is 10.255 years, but the notable standard deviation points to a wide range in the time companies have been listed. Other variables, including the proportion of shares held by the largest shareholder (Top1), the size of the board of directors (Board), the percentage of independent directors (Independent), and the dual-role combination (Dual), also exhibit distinct distributional patterns.

In summary, the descriptive statistics in Table 2 reveal substantial variations in analyst forecast accuracy, levels of institutional ownership, and financial structures among the sampled companies. Additionally, there is a wide range in the age and listing time of the companies, as well as notable differences in the distributional characteristics of other relevant variables.

4. Empirical analysis

4.1. Principal regression analysis

Table 3, Column (1) illustrates the association between the existence of common institutional ownership (Cio1) and the precision of analysts' forecasts. The coefficient for Cio1, which is −0.357, is highly significant at the 1% level (with a t-value of −3.281). This finding underscores that common institutional ownership notably diminishes analysts' forecast accuracy. Consequently, this empirical evidence aligns with hypothesis H1a, which posits a negative correlation between common institutional ownership and analysts' forecast accuracy.

Column (2) of Table 3 showcases the correlation between the extent of standard institutional ownership linkage (Cio2) and analysts' forecast accuracy. The coefficient for Cio2 stands at −0.218 and is statistically significant at the 5% level (t-value of −2.547). This implies that analysts' forecast accuracy tends to decrease as the degree of linkage in common institutional ownership increases. Thus, these empirical findings also corroborate research hypothesis H1b, which postulates a negative relationship between the degree of standard institutional ownership linkage and analysts' forecasting accuracy.

4.2. Intermediary effect analysis

When multiple institutional investors operating within the confines of the same sector pool their resources and collectively hold shares, they can wield considerable sectoral influence and clout. This consolidated power can then be leveraged to either exacerbate pressure on the target company or extend critical resources conducive to its growth. The consequences of this collective action are profound, often resulting in significant alterations to the company's operating conditions and overall performance. This leads to heightened uncertainty and intricacy in the analysts' forecasts as they struggle to make sense of the shifting dynamics.

In our groundbreaking study, we introduce a novel concept: Group_num. This metric is a proxy for the collective influence of common institutional ownership within a peer industry. To calculate this figure, we tally the number of peer firms jointly owned by all routine institutional investors in listed companies, doing so quarterly. Subsequently, we increment this count by one, compute its

logarithm, and calculate the average over the entire year. We conduct a rigorous mediation analysis to validate the mediating role of peer power in the intricate relationship between common institutional ownership and analyst forecast accuracy. The empirical evidence presented in Table 4 offers compelling insights. In model (1), a pronounced negative correlation emerges between common institutional ownership (Cio1) and analyst forecast accuracy (Accur). The coefficient of −0.321, statistically significant at the 1% level (t-value of −3.124), underscores the detrimental impact of common institutional ownership on forecast accuracy. As we progress to model (2), the focus shifts to examining the impact of common institutional ownership on peer industry power (Group_num). The results are unequivocal: a substantial surge in peer power is observed with an increase in common institutional ownership. The coefficient of 0.457, significant at the 1% level (t-value of 4.289), attests to this robust relationship. To further delineate the mediating effect of same-industry power, we incorporate common institutional ownership and same-industry power as explanatory variables in the model (3). The findings reveal that same-industry power significantly negatively influences analysts' forecast accuracy, with a coefficient of −0.158 achieving significance at the 10% level (t-value of −1.876). Meanwhile, the impact of common institutional ownership on analyst forecast accuracy, while still significant, experiences a notable attenuation, with the coefficient decreasing from −0.321 to −0.214 and now achieving significance at the 5% level (t-value of −2.087). This suggests that peer power partially mediates, with common institutional ownership indirectly diminishing forecast accuracy through its augmentation of peer power. Additionally, we undertake a parallel analysis, utilizing the degree of association of common institutional ownership (Cio2). The results, presented in Models (4) to (6), demonstrate that the interconnectedness of common institutional ownership significantly diminishes analysts' forecast accuracy. This effect persists even after accounting for the mediating role of peer power, albeit with a reduced coefficient. Furthermore, the influence of co-industry power on analyst forecast accuracy is notable, further highlighting the complexity of the relationships at play.

4.3. Robustness test

To bolster the study's conclusions, two key tests were performed (see Table 5):

Firstly, we modified the sample time frame. Given the formalization of related-party transactions for listed companies by the SSE in 2011, coupled with the potential ramifications of the CSRC's 2012 revision of the Administrative Measures for Takeovers of Listed Companies on projections of shared institutional ownership and analyst predictions, our analysis prioritizes sample data commencing from 2012. This approach mitigates concerns of policy-induced variations within the sample. Regression outcomes confirm that the adverse impact of shared institutional ownership on analysts' forecasts persists, even after accounting for policy shifts.

Secondly, we refined the benchmark for institutional ownership. Initially, this metric was defined based on a 5% ownership threshold. The robustness test adjusted this criterion to 7% for greater confidence in our results, recalculating the extent of shared institutional ownership (Cio1_7). Regression outcomes reveal that all newly formulated metrics are notably negative at the 10% significance level. This underscores the study's assertions, indicating that our findings on the interplay between shared institutional ownership and analysts' forecasts remain valid even when subjective measurement thresholds are altered. This serves to further cement the credibility of our research outcomes.

4.4. Heterogeneity analysis

In order to gain insight into how ownership characteristics moderate the link between institutional common ownership and analysts' forecast accuracy, this study conducts a heterogeneity analysis. The basis for delineating this analysis is mainly based on the ownership attributes of the firms, i.e., whether the firms are state-owned or non-state-owned. Differences in ownership attributes may lead to significant differences in firms' business strategies, disclosures, and interactions with the market, thus affecting analysts' forecasting accuracy of their performance. In particular, state-owned firms may be subject to more government intervention. They may have relatively lower information transparency, leading to more significant uncertainty for analysts in forecasting their performance. In contrast, non-state-owned firms may be more market-orientated and transparent in their information disclosure, leading to greater accuracy in analysts' forecasts. The outcomes of this ownership heterogeneity analysis are presented in Table 6.

In column (1), we introduce an interaction term (Cio1*State), representing the interplay between the existence of common institutional ownership (Cio1) and the attributes of property rights (State). The findings reveal that the coefficient for this interaction term stands at −0.187 and carries statistical significance at the 5% level. This signifies that the adverse impact of common institutional ownership on analysts' forecast accuracy is more pronounced in state-owned enterprises. At the same time, it is relatively subdued in non-state-owned counterparts. This observation aligns with the expectations outlined in research hypothesis H3, affirming the moderating influence of ownership characteristics on the relationship between common institutional ownership and analyst forecast accuracy.

Moving to column (2), we consider another interaction term (Cio2*State), which examines the intersection between the degree of standard institutional ownership linkage (Cio2) and the nature of property rights (State). The results demonstrate that the coefficient of this interaction term stands at −0.132 and is statistically significant at the 5% level. This finding further bolsters research hypothesis H3 by highlighting that the nature of property rights moderates the relationship between common institutional ownership and analysts' forecast accuracy. The negative influence of common institutional ownership on analyst forecast accuracy is more notable in state-owned enterprises, when considering the mere presence of common institutional ownership and the extent of its linkage with standard institutional ownership.

5. Conclusion

This study examines how shared institutional ownership impacts the precision of analyst forecasts. The empirical data reveals a negative correlation between the two, with peer influence mediating. Furthermore, the type of ownership moderates the relationship between shared institutional ownership and forecast accuracy. Notably, the adverse effect of shared institutional ownership on forecast accuracy is more pronounced in state-owned companies. Robustness checks and heterogeneity analyses reinforce the study's conclusions, offering deeper insights into the information dissemination mechanisms within financial markets and potential avenues for enhancing analyst forecast accuracy.

In terms of practical value, the results of this study are instructive for policymaking and market regulation. First, regulators should strengthen the regulation of institutional investors, especially those with shared ownership in multiple firms, to prevent them from unduly influencing analysts' forecasts through information superiority. Second, for state-owned enterprises, the government should further improve the corporate governance structure and increase the transparency of information disclosure to reduce the uncertainty analysts face in forecasting their performance.

For future research, the results of this study provide new research directions. For example, other potential effects of institutional co-ownership on analysts' behaviour, such as analysts' independence and reputation, can be further explored. In addition, the impact of institutional co-ownership on the information efficiency of the financial market can be studied from a more macro perspective. By studying these issues in depth, we can gain a more comprehensive understanding of the role of institutional co-ownership in the financial market and provide a more scientific basis for market regulation and corporate governance.

Author statement

Jiachen Wang wrote the manuscript, Xinmin Tian performed the formal analysis, Xiaoyue Ma performed the validation.

Data availability

The authors do not have permission to share data.

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