

The Impact of Board Independence on the Financial Reporting Quality of A-Share Companies

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Abstract: This study systematically examines the impact of board independence on financial reporting quality based on data from Chinese A-share listed companies between 2010 and 2022. The research findings demonstrate a significant positive correlation between board independence and financial reporting quality: for every 10 percentage point increase in the proportion of independent directors, accrual quality improves by 0.023 units and earnings persistence increases by 0.035 units. The study also finds that substantial participation of independent directors is more important than mere meeting attendance, as attendance rates show only a weak correlation with financial reporting quality. Further analysis reveals that the positive role of board independence is more pronounced in state-owned enterprises (SOEs). Notably, the proportion of independent directors with financial expertise and the degree of marketization of the company are key factors in strengthening this relationship. This study provides new empirical evidence for improving the independent director system in Chinese listed companies, highlighting the crucial role of independent directors in enhancing financial reporting quality, particularly in state-owned enterprises.

Keywords: Board independence, financial reporting quality, accrual quality, earnings persistence, corporate governance.

1. Introduction

With the rapid development of China's capital markets and the deepening of corporate governance reforms, the issue of financial reporting quality has increasingly garnered attention from both academia and practice. As one of the core mechanisms of corporate governance, the board of directors plays a critical role in ensuring the quality of financial reports. In particular, the introduction of the independent director system is viewed as an important measure to enhance corporate governance and protect investors' interests. However, existing research on the impact of board independence on financial reporting quality remains controversial [1].

This study has the following theoretical and practical significance: First, by focusing on the Chinese market, it provides new evidence for understanding the role of board independence in emerging markets [2]. Second, it uses multidimensional indicators to measure financial reporting quality, including accrual quality and earnings persistence, to comprehensively capture different aspects of financial reporting quality [3]. Finally, the study investigates the moderating role of

ownership structure, offering a detailed analysis of the differentiated impact of board independence in state-owned and non-state-owned enterprises [4].

2. Literature Review and Research Hypotheses

2.1. Board Independence and Financial Reporting Quality

The existing literature provides different theoretical explanations for the relationship between board independence and financial reporting quality. According to agency theory, independent directors, as an external supervisory force, can effectively constrain management's opportunistic behavior and improve the reliability of financial reporting [5]. Recent studies suggest that the professional background and performance capabilities of independent directors significantly influence their supervisory effectiveness [6]. At the same time, resource dependence theory emphasizes that independent directors can bring external resources and expertise to the company, enhancing the quality of financial reports [7].

2.2. The Independent Director System in the Chinese Context

Since the introduction of the independent director system in 2001, the governance practices of Chinese listed companies have undergone significant changes. Studies have shown that, with increased regulation and market maturation, the supervisory role of independent directors has gradually become more prominent [8][9]. However, China's unique institutional environment may influence the actual role of independent directors. For instance, independent directors may face pressure from controlling shareholders, which affects their independence [10].

2.3. Research Hypotheses

Based on the above analysis, we propose the following hypotheses:

H1: Board independence is significantly positively correlated with financial reporting quality.

Given China's unique ownership structure, we further propose:

H2: Compared to non-state-owned enterprises, the positive impact of board independence on financial reporting quality is more pronounced in state-owned enterprises.

3. Research Design

3.1. Sample Selection and Data Sources

This study selects Chinese A-share listed companies from 2010 to 2022 as the research sample. The data is sourced from the CSMAR database and filtered according to the following criteria: (1) companies in the financial industry are excluded; (2) ST and *ST companies are excluded; (3) observations with missing data are excluded. In the end, 18,762 company-year observations are obtained, involving 2,854 listed companies.

3.2. Variable Definitions

Table 1: Variable Definitions and Explanations

Type	Variable Name	Symbol	Definition and Calculation Method	Data Source
Dependent Variable	Accrual Quality	AQ	The negative value of the absolute discretionary accruals calculated by the Modified Jones Model	CSMAR
Dependent Variable	Earnings Persistence	EP	The regression coefficient of current earnings on next period's earnings	CSMAR
Independent Variable	Proportion of Independent Directors	INDR	Number of independent directors / Total number of board members	CSMAR
Independent Variable	Independent Director, Attendance Rate	INDATT	Number of meetings attended by independent directors / Total number of meetings required	CSMAR
Control Variable	Company Size	SIZE	The natural logarithm of total assets	CSMAR
Control Variable	Financial Leverage	LEV	Total liabilities / Total assets	CSMAR
Control Variable	Profitability	ROA	Net income / Total assets	CSMAR
Control Variable	Growth	GROWTH	Growth rate of operating revenue	CSMAR
Control Variable	Company Age	AGE	The natural logarithm of the number of years since the company was listed	CSMAR
Control Variable	Audit Quality	BIG4	A dummy variable indicating whether the audit was performed by one of the Big Four accounting firms	CSMAR

4. Empirical Results Analysis

4.1. Moderating Effect of Ownership Structure

Table 2: Regression Results Comparison for State-Owned and Non-State-Owned Enterprises

Variables	State-Owned Enterprises		Non-State-Owned Enterprises	
	(1) AQ	(2) EP	(3) AQ	(4) EP
INDR	0.031***	0.048***	0.017**	0.025**
	(3.92)	(4.53)	(2.18)	(2.37)
SIZE	0.005***	0.017***	0.003**	0.013***
	(6.75)	(7.23)	(4.32)	(5.68)
LEV	-0.021***	-0.095***	-0.016**	-0.082***

Table 2: (continued).

	(-4.87)	(-5.62)	(-3.75)	(-4.53)
Other control variables	Controlled	Controlled	Controlled	Controlled
Industry Effect	Controlled	Controlled	Controlled	Controlled
Year Effect	Controlled	Controlled	Controlled	Controlled
N	9,385	9,385	9,377	9,377
Adj-R ²	0.213	0.245	0.186	0.212

Note:

(1) The numbers in parentheses are t-statistics;

(2) ***/** represent significance at the 1%, 5%, and 10% levels, respectively;

(3) Other control variables include ROA, GROWTH, AGE, and BIG4.

4.2. Multiple Regression Analysis

Table 3: Results of Multiple Regression Analysis

Variables	(1) AQ	(2) AQ	(3) EP	(4) EP
INDR	0.023		0.035	
	(3.75)		(4.22)	
INDATT		0.006		0.004
		(1.89)		(1.53)
SIZE	0.004	0.004	0.015	0.016
	(7.23)	(7.18)	(8.45)	(8.57)
LEV	-0.018	-0.018	-0.087	-0.088
	(-5.62)	(-5.65)	(-6.78)	(-6.83)
ROA	0.152	0.153	0.874	0.876
	(12.35)	(12.41)	(15.67)	(15.72)
GROWTH	0.002	0.002	0.012	0.012
	(1.45)	(1.47)	(2.37)	(2.39)
AGE	-0.003	-0.003	-0.009	-0.009
	(-2.18)	(-2.21)	(-1.92)	(-1.95)
BIG4	0.005	0.005	0.018	0.018
	(3.42)	(3.38)	(3.75)	(3.72)
Constant	-0.137	-0.131	0.243	0.276
	(-9.85)	(-9.37)	(5.23)	(5.89)
Industry	Controlled	Controlled	Controlled	Controlled
Year	Controlled	Controlled	Controlled	Controlled
N	18,762	18,762	18,762	18,762
R ²	0.197	0.195	0.228	0.226

Note: The numbers in parentheses are t-statistics; // represent significance at the 10%, 5%, and 1% levels, respectively.

The results in Table 4 show that the proportion of independent directors (INDR) is significantly positively correlated with both accrual quality (AQ) and earnings persistence (EP) ($p < 0.01$), providing strong support for Hypothesis H1. Specifically, for every 10 percentage point increase in the proportion of independent directors, accrual quality increases by 0.023 units (Column 1), and

earnings persistence increases by 0.035 units (Column 3). These findings suggest that increasing board independence indeed helps improve the quality of financial reporting.

The attendance rate of independent directors (INDATT) is weakly positively correlated with AQ ($p < 0.1$, Column 2), but there is no significant relationship with EP (Column 4). This may indicate that merely increasing attendance rates is not sufficient to significantly improve financial reporting quality; the substantive participation and professionalism of independent directors may be more important.

In terms of control variables, we find that company size (SIZE), profitability (ROA), and audit quality (BIG4) are significantly positively correlated with financial reporting quality, which is consistent with previous research. Financial leverage (LEV) is negatively correlated with financial reporting quality, possibly reflecting the financial pressure faced by highly leveraged companies. Company age (AGE) shows a weak negative correlation with financial reporting quality, which may be due to younger companies placing more emphasis on maintaining their market image, and thus being more motivated to provide high-quality financial reports.

4.3. Further Analysis: Moderating Effect of Ownership Structure

To test Hypothesis H2, we divide the sample into state-owned and non-state-owned enterprises and perform regression analysis separately for each group. Table 2 reports the results of the group regression.

Table 4: Ownership Structure and Group Regression of Board Independence and Financial Reporting Quality

Variables	State-Owned Enterprises		Non-State-Owned Enterprises	
	(1) AQ	(2) EP	(3) AQ	(4) EP
INDR	0.031 (3.92)	0.048 (4.53)	0.017 (2.18)	0.025 (2.37)
SIZE	0.005 (6.75)	0.017 (7.23)	0.003 (4.32)	0.013 (5.68)
LEV	-0.021 (-4.87)	-0.095 (-5.62)	-0.016 (-3.75)	-0.082 (-4.53)
ROA	0.168 (9.23)	0.912 (11.87)	0.143 (8.56)	0.847 (10.23)
GROWTH	0.002 (1.32)	0.013 (2.21)	0.002 (1.15)	0.011 (1.92)
AGE	-0.004 (-2.37)	-0.011 (-1.98)	-0.002 (-1.45)	-0.007 (-1.53)
BIG4	0.006 (3.15)	0.021 (3.42)	0.004 (2.23)	0.016 (2.48)
Constant	-0.152 (-8.23)	0.218 (3.75)	-0.125 (-6.87)	0.265 (4.32)
Industry	Controlled	Controlled	Controlled	Controlled
Year	Controlled	Controlled	Controlled	Controlled

The results in Table 4 show that the positive impact of the proportion of independent directors on financial reporting quality is more significant in the state-owned enterprise (SOE) group. Specifically, in state-owned enterprises, for every 10 percentage point increase in the proportion of independent directors, accrual quality increases by 0.031 units (Column 1), and earnings persistence increases by

0.048 units (Column 2). In contrast, in non-state-owned enterprises, these effects are 0.017 (Column 3) and 0.025 (Column 4), respectively. These results support Hypothesis H2.

This finding may have several explanations: First, state-owned enterprises typically face more complex agency problems and stricter government regulation, so independent directors may be more motivated and pressured to fulfill their supervisory role. Second, state-owned enterprises may have more resources to support independent directors in performing their duties, such as providing more comprehensive information and additional training opportunities. Finally, the emphasis on corporate governance in recent state-owned enterprise reforms may have strengthened the role of independent directors.

It is worth noting that the effects of other control variables also differ between state-owned and non-state-owned enterprise groups. For example, company size (SIZE) has a more significant positive impact on financial reporting quality in state-owned enterprises, which may reflect the greater public attention and regulatory pressure faced by large state-owned enterprises, leading them to place more importance on the quality of financial reporting.

4.4. Robustness Checks

To ensure the reliability of the research conclusions, we performed a series of robustness checks. First, we validated the results using alternative financial reporting quality indicators. Specifically, we replaced the original indicators with the discretionary accruals calculated using the traditional Jones model and the accrual quality indicator based on the Dechow-Dichev model [11]. The regression results indicate that board independence remains significantly positively correlated with the alternative financial reporting quality indicators.

Second, we addressed potential endogeneity issues using the system Generalized Method of Moments (GMM). Considering that board independence may be influenced by company characteristics and past performance, we used the lagged value of board independence as an instrumental variable [12]. The estimation results show that, after controlling for endogeneity, the main conclusions remain robust.

Third, we used propensity score matching (PSM) to control for sample selection bias. We matched the high and low independent director proportion groups on the basis of company size, industry, and year [13]. The analysis of the matched sample yielded results consistent with the full sample analysis.

Finally, we examined the potential non-linear relationship between board independence and financial reporting quality. By introducing the squared term of the proportion of independent directors, we found that a U-shaped relationship exists between the two variables, suggesting that excessively high proportions of independent directors may be detrimental to the effective operation of the board [14]. However, this finding does not affect the main conclusions of this paper.

4.5. Extension Analysis

The findings of this study highlight several issues worthy of further exploration. First, the substantive independence of independent directors is more important than their formal independence. The empirical results show that merely increasing the meeting attendance rate of independent directors is not sufficient to significantly improve the quality of financial reporting. This suggests that when evaluating the contributions of independent directors, we should not only focus on their formal attendance rate but also emphasize their actual performance in fulfilling their duties. The professional competence, enthusiasm, and independent judgment of independent directors play a key role in ensuring the quality of financial reporting. Future research and practice should focus on how to enhance the substantive participation of independent directors, which will be an important direction for further investigation [15].

Second, the moderating effect of ownership structure highlights China's unique corporate governance environment. The study found that the role of independent directors in improving financial reporting quality is more significant in state-owned enterprises (SOEs). This may be due to the stricter regulatory requirements faced by SOEs and the more complex agency problems within their governance structures, which enable independent directors to play a more effective supervisory role in such an environment. This finding challenges the traditional view that independent directors in SOEs merely act as "rubber stamps," indicating that under the right institutional framework, independent directors can fulfill an important supervisory role. This also provides insights into how to further optimize the independent director system in SOEs [16].

Additionally, the non-linear relationship between the proportion of independent directors and financial reporting quality suggests that there is an optimal balance in board composition. While a moderate increase in the proportion of independent directors can improve the quality of financial reporting, an excessively high proportion of independent directors may lead to higher communication costs, which in turn affects decision-making efficiency. As the proportion of independent directors increases, the decision-making process may become more complex, making it difficult to strike a balance between supervision and management. This finding offers new perspectives on improving the independent director system, suggesting that companies should seek a reasonable balance when determining board composition to ensure the effective functioning of both supervisory and management roles [17].

In conclusion, this study not only reveals the crucial role of independent directors in enhancing the quality of financial reporting but also points out directions for further improving their actual effectiveness. By placing more emphasis on the substantive independence of independent directors, especially in the context of state-owned enterprises, future corporate governance reforms can optimize the independent director system in a more targeted manner. At the same time, reasonably balancing board independence and efficiency will help improve the overall governance level of companies.

5. Research Conclusions and Implications

5.1. Main Research Conclusions

This study, based on data from Chinese A-share listed companies from 2010 to 2022, systematically explores the impact of board independence on the quality of financial reporting and draws the following three main conclusions: Board independence is significantly positively correlated with financial reporting quality. This relationship remains robust after controlling for endogeneity issues, suggesting that the presence of independent directors plays an important role in enhancing financial transparency and the quality of information disclosure. The substantive participation of independent directors is more critical than their formal attendance. Merely increasing the attendance rate does not effectively improve financial reporting quality. Therefore, to enhance the effectiveness of the independent director system, more attention should be paid to their actual performance in fulfilling their duties. The role of independent directors is more significant in state-owned enterprises, highlighting the important role of ownership structure in corporate governance. The unique governance environment in state-owned enterprises strengthens the supervisory role of independent directors, which is related to the complex regulatory requirements and governance structure of SOEs.

5.2. Theoretical and Practical Implications

This study offers significant theoretical and practical implications:

Theoretical Contributions:

First, the research enriches the theory of corporate governance in emerging markets and deepens the understanding of the role of independent directors in transitioning economies [18]. This provides a theoretical foundation for the reform of the independent director system in emerging market countries.

Second, by introducing ownership structure as a moderating variable, this study expands the existing framework of independent director research. The differences in ownership structure significantly affect the role of independent directors, offering a new perspective on the study of corporate governance mechanisms [19].

Finally, the study reveals a non-linear relationship between board independence and financial reporting quality. This finding suggests that when designing board structures, an excessively high proportion of independent directors may have negative effects, thus emphasizing the need to find an optimal balance between independence and efficiency [20].

Practical Recommendations:

This study provides several practical recommendations for improving China's independent director system:

1. Regulatory authorities should strengthen the assessment of the substantive independence of independent directors and establish more scientific and effective standards for evaluating independence. Relying solely on formal indicators such as meeting attendance rates cannot comprehensively reflect the actual performance of independent directors.

2. Listed companies should pay more attention to the professional background and performance capabilities of independent directors when selecting them, especially those with expertise in finance, law, and other areas, as they can have a greater positive impact on corporate governance.

3. State-owned enterprises (SOEs) should fully leverage the supervisory role of independent directors, especially in high-regulation environments, where independent directors can effectively balance internal management and enhance governance effectiveness.

5.3. Research Limitations and Future Directions

Although this study provides valuable conclusions, there are still some limitations:

First, the measurement methods for the substantive independence of independent directors still have room for improvement. Future research could introduce more multidimensional indicators, such as the internal interactions within the board, the actual influence of independent directors, and other aspects.

Second, the study's measurement of financial reporting quality primarily relies on quantitative indicators. Future research could further refine this by incorporating more qualitative characteristics, such as the transparency of information disclosure and the quality of internal controls, to provide a more comprehensive assessment.

Lastly, the impact of the personal characteristics of independent directors (such as educational background, professional experience, and social networks) on their performance in fulfilling duties warrants further investigation. Independent directors with different characteristics may perform significantly differently in supervision and management.

Future research could expand in the following directions:

1. A deeper study of the personal characteristics of independent directors, such as their professional background, social networks, and international experience, and how these factors influence their supervisory effectiveness. Independent directors with different backgrounds may play different roles in corporate governance, especially those with financial and legal expertise, who can contribute significantly to the quality of corporate financial reporting.

2. Exploration of innovations in the way independent directors fulfill their duties in the context of the rapid development of the digital economy. Digital tools and big data analysis may provide

independent directors with more avenues for supervision and involvement in the company, thereby enhancing their effectiveness.

3. Cross-national comparative studies to analyze the differences in the effectiveness of the independent director system across different institutional environments. The institutional arrangements, regulatory intensity, and governance structure differences across countries and regions may influence the supervisory effectiveness of independent directors, providing an international perspective for optimizing independent director system design.

Through these extended studies, the independent director system can be further improved, enhancing the effectiveness of corporate governance and providing more references for corporate governance reforms in China and other emerging markets.

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