



Inspection Supervision and Stock Price Synchronicity

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Abstract

The high-quality development of China's capital market and the modernization of national governance are advancing in a coordinated manner, and inspection supervision plays a critical role in improving market information efficiency. Based on data from Chinese A-share non-financial listed companies from 2009 to 2024, this paper examines the effect of inspection supervision on corporate stock price synchronicity. The results show that inspection supervision significantly reduces the stock price synchronicity of listed firms. Mechanism tests indicate that inspection supervision reduces stock price synchronicity mainly by increasing analyst attention and promoting corporate digital transformation. Heterogeneity tests further show that the inhibitory effect of inspection supervision on stock price synchronicity is more pronounced among firms located in western China, firms in high-tech industries, and firms with higher institutional investor ownership. The conclusions of this paper not only enrich the literature on the economic consequences of inspection supervision and the determinants of stock price synchronicity, but also provide empirical evidence for improving the inspection supervision system and enhancing the pricing efficiency of the capital market.

0 Introduction

The report to the 20th National Congress of the Communist Party of China explicitly proposed to "improve the functions of the capital market and increase the proportion of direct financing" and to "improve the intra-Party supervision system and give full play to the role of political inspections as a sharp sword." These statements incorporate the high-quality development of the capital market

and the construction of the intra-Party inspection supervision system into the broader agenda of modernizing national governance. The information efficiency of the capital market directly determines the effectiveness of resource allocation, while stock price synchronicity reflects the extent to which firm-specific information is incorporated into individual stock prices. Its level is related not only to market pricing efficiency, but also to the ability of the direct financing system to serve the real economy. Inspection supervision plays an important role in promoting improvements in the governance of listed companies and strengthening compliance in information disclosure, thereby connecting intra-Party supervision with the high-quality development of the capital market.

With the steady advancement of China's comprehensive registration-based reform of the capital market, the market has placed increasingly stringent requirements on the information transparency and governance standardization of listed companies. In practice, however, some listed companies still suffer from insufficient information disclosure and imperfect governance mechanisms, resulting in high stock price synchronicity. As a result, firm-specific information cannot be effectively incorporated into stock prices, which constrains the pricing efficiency and resource allocation function of the capital market. Against this background, the coverage of inspection supervision over listed companies has continued to deepen. Inspection supervision conducts oversight and examinations from multiple dimensions, including internal control deficiencies, accounting information quality, and the standardization of business decisions, and has become an important institutional arrangement for improving the corporate information environment and optimizing the capital market ecosystem. Existing studies have confirmed the positive role of inspection supervision in improving corporate governance efficiency, restraining earnings management, and promoting innovation development. Nevertheless, how inspection supervision affects capital market information efficiency, whether it can effectively reduce stock price synchronicity, and through which mechanisms and under what contextual differences it operates remain to be examined in depth.

Accordingly, this paper takes Chinese A-share non-financial listed companies from 2009 to 2024 as the research sample. Based on the policy requirements of the 20th National Congress concerning inspection supervision and capital market development, this paper explores the effect of inspection supervision on stock price synchronicity of listed companies and its internal mechanisms, and further analyzes heterogeneity from the dimensions of region, industry, and ownership structure.

The significance of this study is reflected in three aspects. First, existing studies have mainly focused on the economic consequences of inspection supervision in corporate governance, accounting information quality, and innovation investment, as well as on the determinants of stock price synchronicity such as corporate governance, information disclosure, and external supervision. However, no study has systematically examined the mechanism and heterogeneity of the effect of inspection supervision on stock price synchronicity, and this paper therefore fills this research gap. Second, by examining the mediating effects of analyst attention and corporate digital transformation, this paper reveals the internal transmission paths through which inspection supervision affects stock price synchronicity, thereby enriching research on the mechanisms influencing stock price synchronicity and the governance effects of inspection supervision. Third, this paper conducts multidimensional heterogeneity tests and multiple robustness tests, clarifying the governance differences of inspection supervision across regions, industries, and ownership structures, and providing empirical evidence for strengthening the coordination between inspection supervision and capital market regulation and for improving capital market information efficiency.

1 Literature Review

1.1 Economic consequences of inspection supervision

As an important external supervision mechanism with strong deterrence and authority within the national governance system, the economic consequences of inspection supervision are mainly reflected at two levels: corporate governance and capital market development.

At the corporate governance level, inspection supervision regulates corporate behavior and optimizes decision-making logic through multidimensional governance effects. While improving governance efficiency, it also promotes the generation and release of firm-specific information and thus becomes a key factor affecting the corporate information environment. In terms of accounting information quality, inspection supervision can effectively restrain corporate earnings management and improve accounting information quality (Chen Kejing et al., 2021), and it can enhance information comparability by standardizing accounting practices. In terms of internal control and agency costs, inspection supervision promotes the improvement of internal control systems through its "deterrence effect" and "persuasion effect" (Tang Dapeng et al., 2017), reduces agency costs and political risks, and facilitates long-term value investment (Song Chang et al., 2022). In terms of business decisions and performance, inspection supervision can increase corporate innovation input and efficiency (Chen Kejing et al., 2020; Zhang Jianping, 2021), restrain inefficient investment, and improve long-term corporate performance by increasing production efficiency and reducing agency costs (Chen Kejing et al., 2022). These governance effects jointly promote the efficient allocation of corporate resources and provide a micro-level foundation for the generation and disclosure of firm-specific information.

At the capital market level, inspection supervision also has significant positive externalities. Its governance effectiveness can be transmitted to regions and capital markets, thereby optimizing regional resource allocation and the information ecosystem. Studies show that inspection supervision can correct the short-sighted behavior of local officials and promote regional innovation (Liu Zhui et al., 2024), and can purify the business environment through anti-corruption actions, reducing information barriers and resource misallocation (Tian Lihui et al., 2020). From the perspective of institutional functions, inspection supervision provides institutional safeguards for the healthy development of the capital market by integrating supervisory resources and consolidating supervisory forces (Liu Shilin, 2018). These macro-level governance effects help reduce information asymmetry in the overall capital market, improve the information environment, and create conditions for stock prices to more fully reflect individual firm value.

1.2 Determinants of stock price synchronicity

Stock price synchronicity originates from the R-squared research proposed by Roll (1988). Its core meaning is the degree to which individual stock prices co-move with market and industry stock prices. The theoretical explanations are mainly divided into two perspectives: the "information efficiency view" and the "irrational behavior view." The information efficiency view holds that lower stock price synchronicity indicates that stock prices contain more firm-specific information and that capital market information efficiency is higher (Morck et al., 2000; Jin and Myers, 2006). This view has received extensive support in the Chinese capital market (Xia Xue et al., 2025). By contrast, the irrational behavior view holds that market noise and investor psychological biases may reduce stock price synchronicity, in which case synchronicity may positively reflect information efficiency (Xu Nianxing et al., 2013). With the continuous improvement of China's institutional

environment, the information efficiency view has gradually become the mainstream interpretation. In other words, stock price synchronicity is generally regarded as a negative indicator of capital market information efficiency.

From the perspective of information supply, the content and form of listed companies' information disclosure have important effects on stock price synchronicity. For example, lower longitudinal textual similarity in annual reports and richer forward-looking information help reduce stock price synchronicity (Song Xinbei et al., 2024; Li Zijian et al., 2022). Data asset disclosure can also facilitate the incorporation of firm-specific information into stock prices by alleviating information asymmetry and attracting investor attention (Xu Haiwei et al., 2024). Corporate digital transformation may have dual effects. On the one hand, it can restrain synchronicity by improving information quality and governance level (Fang Qiaoling et al., 2024). On the other hand, it may increase synchronicity by aggravating information gaps and agency problems (He Chao et al., 2023).

From the perspective of corporate governance, effective governance mechanisms can reduce stock price synchronicity by improving information transparency. Independent director networks, board governance quality, and internal control audits all promote the disclosure of firm-specific information and enhance the information content of stock prices (Gong Xiaoli, 2022; Song He et al., 2025; Xu Jingping, 2023). The synergy between digital transformation and corporate governance can further strengthen this governance effect (Fang Qiaoling et al., 2024).

From the perspective of external supervision, the rational behavior of market participants such as institutional investors and analysts helps incorporate firm-specific information into stock prices. Institutional investors can improve information efficiency through shareholding networks and common ownership (Liu Guang, 2022; Li Yumin et al., 2024). Analysts discover and transmit firm-specific information through tracking, field research, and textual analysis (Zhu Hongjun et al., 2007; Yi Zhihong et al., 2019; Cao Xinwei et al., 2015). However, irrational behaviors such as analyst herding may also weaken information efficiency (Zhang Dayong et al., 2021), indicating the dual nature of external supervisory behavior.

2 Research Design

2.1 Research hypotheses

Stock price synchronicity measures the relative proportion of firm-specific information and market- or industry-wide common information in stock price fluctuations (Roll, 1988). Its level depends on the efficiency with which firm-specific information is generated, disclosed, and transmitted. As an authoritative external supervision mechanism, inspection supervision reduces stock price synchronicity mainly through information release and governance optimization.

From the perspective of information release, inspection supervision focuses on key issues such as information disclosure compliance and governance deficiencies. Through on-site inspections and rectification notifications, it directly reveals hidden firm-specific information and reduces information asymmetry (Teng Fei et al., 2022). At the same time, the strong signaling attribute of inspection supervision activates the combined force of social supervision and increases media and investor attention (Xia Xue et al., 2025), encouraging market participants to actively discover firm-specific information and promoting its full reflection in stock prices. Existing studies have found that inspection supervision can effectively restrain earnings management (Chen Kejing et al.,

2021) and improve accounting information quality and comparability, all of which facilitate the incorporation of firm-specific information into stock prices.

From the perspective of governance optimization, inspection supervision regulates corporate behavior through deterrence and persuasion effects. On the one hand, it constrains opportunistic behavior by managers, such as rent-seeking and short-sighted decision-making (Zhang Jianping, 2020), and reduces the concealment of heterogeneous information. On the other hand, it promotes improvements in internal control systems (Tang Dapeng et al., 2017), reduces agency costs (Song Chang et al., 2022), and optimizes the internal mechanisms for information generation and disclosure. Good corporate governance improves information transparency and enables stock prices to more fully reflect individual firm value rather than merely follow market or industry fluctuations (Gong Xiaoli et al., 2022; Song He et al., 2025).

In summary, inspection supervision promotes the incorporation of firm-specific information into stock prices and reduces stock price synchronicity through information release and governance optimization. Accordingly, the main hypothesis is proposed as follows:

H1: Holding other conditions constant, inspection supervision significantly reduces the stock price synchronicity of listed companies.

As core information intermediaries in the capital market, analysts may play a transmission role between inspection supervision and stock price synchronicity through their attention.

Inspection supervision has an institutional signaling attribute. Firms subject to inspection are often regarded as firms with potentially improved governance standards and information transparency (Chen Kejing et al., 2022), and this signal may attract analysts and increase analyst coverage. On the one hand, rectification reports and regulatory letters disclosed during inspections provide analysts with abundant research materials and reduce information collection costs (Liu Guang, 2022). On the other hand, by following inspected firms, analysts can convey professional interpretations to the market and enhance the attention to and authority of their reports (Yi Zhihong et al., 2019). Increased external supervision intensity raises analysts' willingness to follow firms (Xia Xue et al., 2025). As a high-intensity form of external supervision, inspection supervision can facilitate this process.

Increased analyst attention promotes the incorporation of firm-specific information into stock prices. Through field research, analysts obtain first-hand private information and verify the authenticity and completeness of public information (Cao Xinwei et al., 2015). Especially after inspection supervision reveals problems, analysts tend to focus more closely on the specific progress of governance improvement and risk rectification, thereby uncovering differentiated information. By publishing earnings forecasts and industry comparative reports, analysts transform firm-specific information into signals that the market can understand and reduce investors' reliance on market- and industry-level information (Zhu Hongjun et al., 2007). Analysts with information advantages derived from fund-equity relationships can further improve information transmission efficiency through in-depth information mining (Yi Zhihong et al., 2018), thereby strengthening the inhibitory effect on stock price synchronicity.

In summary, inspection supervision attracts analyst attention by releasing positive signals. Analysts then promote the incorporation of firm-specific information into stock prices through information discovery and transmission, thereby reducing stock price synchronicity. Accordingly, the following hypothesis is proposed:

H2: Holding other conditions constant, analyst attention plays a mediating role between inspection supervision and the stock price synchronicity of listed companies. That is, inspection supervision improves analyst attention, facilitates the transmission of firm-specific information, and thereby reduces stock price synchronicity.

Inspection supervision provides safeguards for the healthy development of digital transformation by standardizing corporate governance. On the one hand, problems revealed by inspections, such as inefficient internal management and non-standard information disclosure, encourage firms to optimize business processes and improve information transmission efficiency through digital transformation (Tang Dapeng et al., 2017), and to incorporate digitalization into strategic planning in order to achieve refined management (Chen Kejing et al., 2020). On the other hand, the deterrence effect of inspection supervision can restrain managers from using data power for opportunistic behavior (He Chao et al., 2023), reduce information monopoly and hidden decision-making problems in digital transformation, and ensure that digital transformation focuses on improving information transparency and governance efficiency.

Under the constraints of inspection supervision, the governance-empowering effect of digital transformation increases firm-specific information in stock prices. First, digitalization reduces managers' room for earnings manipulation through data standardization and automated process handling, and improves accounting information quality and comparability (Fang Qiaoling et al., 2024), providing a foundation for firm-specific information to be incorporated into stock prices. Second, digital platforms improve the timeliness and completeness of information disclosure, making it easier for investors to obtain heterogeneous information on firms' operations, research and development, and other activities (Xu Jingping, 2023). Third, the synergy between digitalization and internal control can further compress agency space and strengthen the inhibitory effect of information transparency on stock price synchronicity (Fang Qiaoling et al., 2024).

In summary, inspection supervision reduces information asymmetry and thereby restrains stock price synchronicity by guiding corporate digital transformation toward governance empowerment. Accordingly, the following hypothesis is proposed:

H3: Holding other conditions constant, corporate digitalization plays a mediating role between inspection supervision and the stock price synchronicity of listed companies. That is, inspection supervision promotes corporate digital transformation and thereby reduces stock price synchronicity.

2.2 Sample and Variables

2.2.1 Sample selection

This paper selects A-share listed companies from 2009 to 2024 as the research objects and processes the data as follows: (1) financial firms are excluded; and (2) ST and *ST firms are excluded. After screening, a total of 55,561 observations from 5,261 listed companies are obtained. To eliminate the influence of extreme values, all continuous variables are winsorized at the upper and lower 1% levels. All data are obtained from the CSMAR database.

2.2.2 Model specification and variable definitions

This paper focuses on the impact of inspection supervision on the stock price synchronicity of listed companies. The following model is constructed. All models control for firm fixed effects (Firm) and year fixed effects (Year) to mitigate the interference of individual heterogeneity and time trends.

$SYN_{\{i,t\}} = \alpha_0 + \alpha_1 \text{Test}_i \times \text{Post}_t + \text{Controls}_{\{i,t\}} + \text{Firm}_i + \text{Year}_t + \text{epsilon}_{\{i,t\}}$
where i denotes the firm and t denotes the year. $SYN_{\{i,t\}}$ represents the stock price synchronicity of firm i in year t . $\text{Test}_i \times \text{Post}_t$ represents the inspection supervision policy; it equals 1 if the firm is subject to inspection supervision, and 0 otherwise. $\text{Controls}_{\{i,t\}}$ denotes a set of control variables. Firm_i denotes firm fixed effects, Year_t denotes year fixed effects, and $\text{epsilon}_{\{i,t\}}$ is the random disturbance term.

The control variables selected in this paper include firm size (Size), return on assets (ROA), board size (Board), proportion of independent directors (Indep), CEO-chairman duality (Dual), shareholding ratio of the largest shareholder (Top1), firm age (FirmAge), and stock return volatility (Stdret).

Table 1: Variable Definitions

Variable Symbol	Variable Name	Variable Definition
SYN	Stock price synchronicity	The core observation indicator set according to the research design, reflecting the co-movement between individual stock prices and market and industry stock prices.
DID	Inspection supervision	Equals 1 for treatment-group firms after policy implementation, and 0 otherwise.
DigitC	Corporate digital transformation	Measured by textual analysis or relevant indicators to capture the degree of corporate digital transformation.
AnaAttention	Analyst attention	Natural logarithm of the number of analysts following the firm plus 1, measuring the attention of information intermediaries.
Size	Firm size	Natural logarithm of total assets.
ROA	Return on assets	Net profit divided by total assets.
Board	Board size	Natural logarithm of the number of board directors.
Indep	Proportion of independent directors	Number of independent directors divided by total number of board directors.
Dual	CEO-chairman duality	Equals 1 if the chairman and general manager are the same person, and 0 otherwise.
Top1	Shareholding ratio of the largest shareholder	Proportion of shares held by the largest shareholder.
FirmAge	Firm age	Natural logarithm of firm age plus 1.
Stdret	Stock return volatility	Standard deviation of the firm's annual weekly stock returns.

2.2.3 Descriptive statistics

Table 2 reports the descriptive statistics for the main variables, including the number of observations, mean, standard deviation, minimum, median, and maximum. The results indicate that all variables are reasonably distributed. The mean of stock price synchronicity is 0.026, with a minimum value of 0 and a maximum value of 0.438, suggesting substantial differences in stock price synchronicity across listed companies. The mean of inspection supervision is 0.699, indicating that observations in the treatment group account for nearly 70% of the

sample, and the sample distribution is reasonable.

Table 2: Descriptive Statistics of Variables

Variable	Obs.	Mean	Std. Dev.	Min.	Median	Max.
SYN	54988	0.026	0.025	0.000	0.020	0.438
DID	55561	0.699	0.459	0.000	1.000	1.000
Size	55561	22.092	1.297	19.723	21.894	26.175
ROA	55561	0.038	0.065	-0.225	0.038	0.215
Board	55561	2.128	0.206	1.609	2.197	2.708
Indep	55561	0.374	0.053	0.286	0.333	0.571
Dual	55561	0.276	0.447	0.000	0.000	1.000
Top1	55561	0.346	0.152	0.084	0.322	0.743
FirmAge	55561	2.863	0.400	1.609	2.944	3.555
Stdret	55561	0.132	0.066	0.041	0.117	0.422

3 Empirical Results

3.1 Baseline regression

Table 4 reports the regression results for the effect of inspection supervision on stock price synchronicity. Column (1) presents the results without control variables. The regression coefficient of inspection supervision is -0.002 and is significant at the 1% level. In terms of economic significance, after a listed company is subject to inspection supervision, its stock price synchronicity decreases by 0.002 relative to listed companies not subject to inspection supervision. These results indicate that when only the policy shock is considered, inspection supervision significantly reduces the stock price synchronicity of listed companies. After control variables are included, the regression results in column (2) show that the coefficient of inspection supervision remains significantly negative, indicating that the negative effect of inspection supervision on stock price synchronicity remains significant after controlling for firm characteristics, governance structure, and other variables.

These results suggest that inspection supervision significantly improves corporate information transparency, promotes the incorporation of firm-specific information into stock prices, and reduces corporate stock price synchronicity. The findings support the argument that inspection supervision reveals heterogeneous firm information through governance optimization and information release, thereby reducing corporate stock price synchronicity.

Table 4: Inspection Supervision and Stock Price Synchronicity

	(1)	(2)
	SYN	SYN
DID	-0.002***	-0.002***
	(-2.923)	(-2.874)
Size		-0.001***
		(-9.022)
ROA		-0.045***

		(-29.917)
Board		-0.002**
		(-2.403)
Indep		-0.006**
		(-2.530)
Dual		-0.000
		(-1.323)
Top1		-0.007***
		(-6.146)
FirmAge		0.002*
		(1.816)
Stdret		-0.062***
		(-42.481)
_cons	0.027***	0.073***
	(59.798)	(15.478)
Firm	Yes	Yes
Year	Yes	Yes
N	54932	54932
Adj. R2	0.498	0.526

3.2 Mediating effect tests

Table 5 presents the results of the mediating effect tests for analyst attention and corporate digital transformation. Column (1) reports the regression of inspection supervision on corporate digital transformation. The coefficient of inspection supervision on corporate digitalization is 0.101 and is significant at the 1% level, indicating that inspection supervision effectively promotes the improvement of digitalization among inspected firms. Column (2) reports the results after DigitC is included in the regression model. The coefficient of DigitC on SYN is -0.001, and the effect of inspection supervision on stock price synchronicity remains significantly negative. This indicates that corporate digital transformation plays a mediating role in the negative relationship between inspection supervision and stock price synchronicity, and DID reduces SYN by improving corporate digitalization. Column (3) shows that the regression coefficient of inspection supervision on analyst attention is 0.084 and significantly positive at the 1% level, indicating that inspection supervision significantly increases analyst attention. After analyst attention is included in the regression model, column (4) shows that the coefficient of analyst attention on stock price synchronicity is -0.006 and significant at the 1% level, while the coefficient of inspection supervision on stock price synchronicity remains -0.002. This indicates that analyst attention also plays a significant mediating role in the relationship between inspection supervision and stock price synchronicity.

Table 5: Mediating Effect Test Results

	(1)	(2)	(3)	(4)
	DigitC	SYN	AnaAttention	SYN
DID	0.101***	-0.002***	0.084***	-0.002**

	(3.702)	(-2.725)	(3.188)	(-2.134)
Size	0.222***	-0.001***	0.407***	0.000*
	(31.929)	(-8.286)	(51.603)	(1.895)
ROA	0.005	-0.044***	4.146***	-0.024***
	(0.073)	(-29.261)	(58.736)	(-11.757)
Board	-0.037	-0.002**	0.097***	-0.001
	(-1.155)	(-2.424)	(2.966)	(-0.713)
Indep	-0.325***	-0.007***	0.209**	-0.002
	(-3.140)	(-2.840)	(2.031)	(-0.796)
Dual	0.028**	-0.000	0.037***	0.000
	(2.458)	(-1.231)	(3.204)	(0.654)
Top1	-0.453***	-0.008***	-0.109**	-0.007***
	(-9.137)	(-6.574)	(-2.126)	(-5.191)
FirmAge	0.009	0.002**	-0.170***	0.001
	(0.219)	(2.054)	(-4.015)	(0.781)
Stdret	0.056	-0.062***	0.330***	-0.053***
	(0.893)	(-42.488)	(5.170)	(-30.319)
DigitC		-0.001***		
		(-7.320)		
AnaAttention				-0.006***
				(-36.412)
_cons	-3.295***	0.071***	-7.256***	0.036***
	(-16.129)	(15.017)	(-32.677)	(5.738)
Firm	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	54886	54354	36019	35822
Adj. R2	0.754	0.521	0.594	0.526

3.3 Heterogeneity analysis

To explore contextual differences in the effect of inspection supervision on stock price synchronicity, this paper conducts heterogeneity analysis from three dimensions: regional differences, industry attributes, and institutional investor ownership. The results are shown in Table 6.

This paper divides the sample into two groups according to firms' registered locations: western China and central-eastern China. The regression results show that the coefficient of inspection supervision in western China is -0.004 and significant at the 1% level, whereas it is not significant in central-eastern China. This indicates that the inhibitory effect of inspection supervision on stock price synchronicity is more pronounced in western China. A possible reason is that listed companies in western China face a relatively poor information environment and lower levels of

corporate governance. As an external governance mechanism, inspection supervision can more effectively improve information transparency and restrain stock price synchronicity in these firms. By contrast, central-eastern China has a higher degree of marketization and relatively more complete external supervision mechanisms, so the marginal effect of inspection supervision is weaker.

The sample is also grouped according to whether firms belong to high-tech industries. The results show that the coefficient of inspection supervision among high-tech firms is -0.001 and significant at the 10% level, while the coefficient among non-high-tech firms is also -0.001 but statistically insignificant. This suggests that inspection supervision has a certain inhibitory effect on stock price synchronicity among high-tech firms, but its effect on non-high-tech firms is limited. High-tech firms usually have higher information asymmetry and larger noise components in stock price fluctuations. By improving information disclosure quality and corporate governance, inspection supervision can more effectively enhance the information content of stock prices. In non-high-tech firms, the information environment is relatively stable and the governance effect of inspection supervision is not obvious.

Based on the median institutional investor ownership ratio, the sample is divided into high-ownership and low-ownership groups. The results show that in the group with high institutional investor ownership, the coefficient is -0.003 and significant at the 1% level, while it is insignificant in the low-ownership group. The results indicate that inspection supervision inhibits stock price synchronicity for firms with a high proportion of institutional investors, but its inhibitory effect is not obvious for firms with a low proportion of institutional investors. Institutional investors have stronger information interpretation and supervision capabilities. Inspection supervision and institutional investor supervision form a complementary effect, jointly improving corporate governance and information transparency and thereby reducing stock price synchronicity more effectively. In firms with lower institutional investor ownership, the external supervision mechanism is relatively singular, and inspection supervision alone is less likely to exert a significant effect.

Table 6: Heterogeneity Test Results

	(1)	(2)	(3)	(4)	(5)	(6)
	Western China	Central-eastern China	High-tech firms	Non-high-tech firms	High institutional ownership	Low institutional ownership
DID	-0.004***	-0.000	-0.001*	-0.001	-0.003***	-0.000
	(-3.698)	(-0.105)	(-1.712)	(-0.645)	(-2.786)	(-0.212)
Size	0.000	-0.002***	-0.003***	0.000	-0.001***	-0.003***
	(0.757)	(-10.182)	(-16.137)	(1.511)	(-3.301)	(-10.855)
ROA	-0.049***	-0.045***	-0.039***	-0.057***	-0.062***	-0.029***
	(-11.958)	(-27.430)	(-22.915)	(-20.461)	(-24.202)	(-15.709)
Board	-0.003	-0.002**	-0.002*	-0.001	-0.000	-0.004***
	(-1.417)	(-2.051)	(-1.850)	(-1.021)	(-0.275)	(-4.117)
Indep	-0.011*	-0.005**	-0.004	-0.010**	-0.004	-0.013***
	(-1.690)	(-2.096)	(-1.263)	(-2.455)	(-1.056)	(-3.851)
Dual	0.000	-0.000	-0.000	0.000	-0.000	-0.000

	(0.015)	(-1.383)	(-1.357)	(0.492)	(-0.410)	(-0.674)
Top1	-0.011***	-0.007***	-0.007***	-0.016***	-0.006***	-0.001
	(-3.724)	(-5.325)	(-4.927)	(-8.116)	(-3.709)	(-0.380)
FirmAge	0.005*	0.001	0.005***	0.002	-0.000	0.005***
	(1.947)	(1.234)	(4.485)	(1.443)	(-0.084)	(3.347)
Stdret	-0.068***	-0.061***	-0.051***	-0.078***	-0.072***	-0.052***
	(-15.970)	(-39.396)	(-30.732)	(-30.087)	(-31.418)	(-28.228)
_cons	0.033***	0.079***	0.097***	0.040***	0.065***	0.091***
	(2.607)	(15.527)	(16.639)	(4.773)	(8.863)	(12.412)
Firm	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
N	7238	47694	32289	22625	27821	26772
Adj. R2	0.499	0.531	0.522	0.528	0.544	0.540

3.4 Robustness tests

To alleviate potential reverse causality between inspection supervision and stock price synchronicity, this paper follows the method of Xu Nianxing (2013) and re-runs the regression using a one-period lag of inspection supervision. The results in column (1) of Table 7 show that the coefficient of the one-period lagged inspection supervision dummy variable is negative and significant at the 10% level. This indicates that the inhibitory effect of inspection supervision on stock price synchronicity is persistent, and lagged inspection supervision can still significantly reduce the stock price synchronicity of listed companies. This confirms the direction of causality between the two variables and effectively rules out interference from reverse causality in the core conclusion.

The targets of inspection supervision are not selected randomly, but are determined comprehensively based on firms' own characteristics and other factors. This non-random sample selection may generate sample selection bias and thus affect the reliability of the core regression results. Drawing on the DID model of Sun Dezhi and Guo Yangsheng (2018) and others, this paper conducts propensity score matching (PSM). Variables related to inspection supervision, including firm size, profitability, and corporate governance characteristics, are selected as matching characteristics. Uninspected firms with similar characteristics are matched to inspected firms as a control group, and the research sample is reconstructed for re-regression tests. As shown in column (2), after matching, the coefficient of inspection supervision is -0.002 and significantly negative at the 1% level. After controlling for sample selection bias, inspection supervision still significantly reduces corporate stock price synchronicity, and the core conclusion does not change substantively.

As sudden external market shocks, stock market crises have significant effects on stock price fluctuations and information transmission efficiency in the capital market, and may therefore interfere with the core relationship between inspection supervision and stock price synchronicity. The time series of the research sample covers two major financial shock events: the 2008 international financial crisis and the abnormal fluctuations in the Chinese stock market in 2015. Because existing literature lacks an effective variable construction method to control for such macro shocks, this paper follows Tang Song et al. (2020) and excludes the observations in 2009,

2010, and 2015 to re-examine the effect of inspection supervision on stock price synchronicity. Column (3) of Table 7 shows that after excluding the effect of stock market crashes, the coefficient of inspection supervision remains -0.002 and significant at the 1% level. This indicates that after excluding the interference of stock market crashes as external market shocks, the inhibitory effect of inspection supervision on stock price synchronicity remains significant, further verifying the robustness of the core research conclusion.

Table 7: Robustness Test Results

	(1)	(2)	(3)
	SYN	SYN	SYN
L2_DID	-0.001*		
	(-1.834)		
DID		-0.002***	-0.002***
		(-2.811)	(-2.616)
Size		-0.001***	-0.001***
		(-8.615)	(-6.686)
ROA		-0.046***	-0.049***
		(-28.375)	(-30.638)
Board		-0.003***	-0.002**
		(-3.434)	(-2.143)
Indep		-0.008***	-0.007**
		(-3.220)	(-2.548)
Dual		-0.000	-0.000
		(-1.429)	(-1.538)
Top1		-0.007***	-0.008***
		(-5.721)	(-6.380)
FirmAge		0.002**	0.002**
		(2.301)	(2.362)
Stdret		-0.069***	-0.070***
		(-41.953)	(-43.479)
_cons	0.001	0.076***	0.067***
	(0.207)	(15.111)	(13.176)
Industry	Yes	Yes	Yes
Year	Yes	Yes	Yes
N	42321	48236	49409
Adj. R2	0.513	0.521	0.537

4 Main Conclusions

Using Chinese A-share non-financial listed companies from 2009 to 2024 as the research sample, this paper verifies the effect of inspection supervision on stock price synchronicity and reaches the following conclusions. (1) Inspection supervision has a significant inhibitory effect on the stock price synchronicity of listed companies, and this conclusion remains valid after a series of robustness tests. (2) Mechanism tests show that inspection supervision reduces stock price synchronicity by increasing analyst attention and promoting corporate digital transformation. (3) Heterogeneity tests show that the inhibitory effect of inspection supervision on stock price synchronicity is more significant among firms located in western China, high-tech firms, and firms with high institutional investor ownership.

Based on the above conclusions, this paper offers the following recommendations regarding how inspection supervision can restrain stock price synchronicity.

First, to give full play to the role of inspection supervision in corporate information disclosure, internal control, and governance structure, it is necessary to strengthen its positive guiding function for the information environment. Regulatory authorities may link inspection results with the quality of corporate information disclosure and transform inspection supervision into governance effectiveness through scientific design and strict implementation. By improving inspection feedback, public disclosure of rectification, and the use of inspection results, regulators can enhance the transparency of the inspection process and the credibility of inspection outcomes.

Second, analysts should be encouraged to strengthen follow-up research on inspected firms. In particular, they should conduct in-depth mining and professional interpretation of dynamic information such as rectification processes, governance improvements, and digital progress, so as to improve the market's ability to identify firm-specific information. At the same time, regulatory authorities should strengthen the regulation of analyst behavior to prevent irrational behaviors such as herding from interfering with information efficiency. Firms should incorporate digital transformation into their corporate governance strategies and promote data standardization, process transparency, and intelligent decision-making, thereby improving information disclosure quality and internal control efficiency.

Third, differentiated supervision strategies should be implemented in inspection arrangements by considering regional development levels, industry characteristics, and governance foundations. For firms in western China, inspection frequency and depth can be increased to compensate for deficiencies in external governance mechanisms. For high-tech firms, attention should focus on information disclosure transparency and innovation governance mechanisms. For firms with concentrated institutional investors, institutional investors can be guided to form collaborative governance with inspection supervision.

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