

Boundary Conditions of Institutional Investors' Impact on Stock Price Crash Risk

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Abstract. Institutional investors are central participants in the capital market, and stock price crash risk is directly tied to the stability of that market. Existing studies mainly focus on how investors from institutions influence stock price crash risk, yet few studies summarize the boundary conditions under which this influence operates. This paper systematically reviews these boundary conditions from three dimensions: institutional investors' own heterogeneity, firms' own characteristics, and the external market and institutional environment. The literature review results indicate that under different boundary conditions, there are pronounced differences in the direction of institutional investors' impact on stock price crash risk (inhibition or exacerbation), as well as the strength of various mechanisms of influence. Finally, this paper identifies future research directions related to multi-boundary interaction effects and the ongoing reform of China's capital markets, providing a literature basis for deeply understanding the heterogeneous role of institutional investors and improving capital market regulation.

Keywords: Institutional investors, stock price crash risk, boundary conditions, heterogeneity

1. Introduction

Preventing extreme stock price risks and ensuring that systemic financial risks do not occur are key objectives of the capital market. As domestic institutional investors continue to grow in scale, policymakers expect these institutions to improve corporate governance and reduce market volatility. Nevertheless, there has long been debate over how institutional investor holdings affect stock price crash risk; some empirical studies even reach conclusions that are opposed to policy expectations. For example, several scholars find that shareholdings held by institutional investors exacerbate such risk [1]. A main reason for the divergence of conclusions in the above literature is the differences in various boundary conditions, such as sample selection and context in different studies, which forms the starting point of this paper.

Current domestic reviews on investors from institutions and the risk of stock price crashes mainly emphasize the mechanisms between the two, with relatively little literature specifically summarizing boundary conditions. This paper takes boundary conditions as the core clue, integrates empirical research in Chinese and English in recent years, and sorts out the internal logic and empirical evidence of various boundaries from three dimensions: institutional investors' own heterogeneity, firms' own characteristics, and external market and institutional environment. It examines gaps in

current research and suggests directions for future studies, providing a reference for improving the classified supervision of domestic investors from institutions and preventing stock price collapses.

2. Institutional investors' own heterogeneity

2.1. Institutional investment horizons

The adoption of long-term or short-term investment strategies by institutional investors can lead to pronounced differences in their governance behavior. Some scholars argue that long-term shareholding will improve corporate governance quality. This governance effect manifests as curbing managerial short-sightedness, enhancing information transparency, and strengthening accountability, ultimately reducing the risk of crashes [2]. The basic mechanism is straightforward: long-term institutions have higher exit costs, so they are more likely to take on supervisory and governance roles, while short-term institutions value short-term gains more. Another sample based on US-listed companies also shows that long-horizon investors from institutions reduce stock price crash risk, while their short-horizon counterparts exacerbate it [3]. This indicates that investment horizons play an important role as a boundary condition in both Chinese and American capital market scenarios.

2.2. Institutional investment behavior

Based on their investment behavior, institutional investors may be categorized as stable-oriented and transactional-oriented institutional investors. The two differ clearly in their business models and in how they engage in corporate governance. The former focuses on long-term value investing, actively supervises management, and participates in corporate governance; the latter pursues short-term gains and tends to collude with management [4].

Using a sample comprising all A-share listed companies spanning the period 2003-2013, scholars reach a conclusion that contradicts theoretical predictions: Whether stable or transactional institutions hold shares, they will exacerbate the future risk of stock price collapses [1, 5]. Such differentiated results may be due to the overall immature development of the A-share market institutions during that period, and the governance and supervisory functions of stable institutions were not fully utilized. Another study excluded samples from the ChiNext and the Small and Medium-sized Enterprises Board, analyzing A-share listed companies on the Main Board over the 2009-2016 window. These empirical outcomes reveal that stable investors from institutions help mitigate such risk, while transactional counterparts exert the reverse influence [5]. Comparing the two studies, it can be seen that differences in sample screening range and time window can alter the regression results of stable/transactional institutions on such risk, which is also an important sample boundary.

2.3. Independence of institutions

Several studies categorize institutional investors into two groups: independent ones without commercial links to invested firms and featuring higher independence, and non-independent counterparts that maintain such commercial connections [6, 7].

Some scholars find that shareholdings by independent investors from institutions exacerbate stock price crash risk, while non-independent institutional investors' shareholdings show an inverted U-shaped relationship with that risk. When non-independent institutions hold a small stake, it is

mainly manifested as collusion motivation, which will exacerbate the risk. However, as their ownership stake rises, it will generate supervisory motivation, thereby suppressing the risk [8]. This result suggests that institutional non-independence does not necessarily equate to a natural supervisory effect, and non-independent institutions may also engage in short-term trading behavior.

3. Firms' own characteristics

3.1. Internal governance level of the firm

Under this boundary condition, there are two situations involved. One situation is that institutional investors replace internal governance of firms. When the level of internal governance of the firm is poor, institutional investors, as external supervisory forces, will fill the governance gap, and they will perform a more pronounced supervisory governance function. That is, when a firm's internal governance is poorer, institutional investors reduce stock price crash risk more strongly. Multiple empirical studies provide evidence for the governance substitution effect: Whether they involve institutional cross-ownership, shareholdings by the China Securities Investor Services Center (CSISC), or dual-holding institutional investors (institutions that simultaneously invest in equity and debt of the same listed company), their effectiveness in reducing such risk is stronger within firms characterized by poor internal governance [9-11]. These findings confirm the substitution effect of institutional investor governance.

Another situation involves institutional investors working alongside corporate management to exercise governance. When internal governance is strong, institutional investors have a larger governance effect. In other words, better internal governance strengthens the ability of institutional investors to reduce stock price crash risk. Related research indicates that the diversification of the board composition can optimize the internal governance system of the firm, thereby enhancing the risk-inhibiting effect of long-term institutional shareholding [2]. The results reveal that both substitution and complementary effects exist under the boundary condition of firms' internal governance. It is necessary to consider the type of institution and governance elements of the firm, which is also one of the sources of differentiation in existing literature conclusions.

3.2. Firm information environment

Some scholars find that long-horizon investors from institutions mitigate stock price crash risk more clearly in firms with lower information transparency [2]. Several studies suggest that the inhibitory effect of institutional cross-ownership and dual-holding investors on the risk grows as firm information asymmetry rises [9, 11]. These findings reflect a consistent logic: For institutional investors whose main function is supervision, greater information asymmetry within a firm tends to increase the marginal gains from the institution's external monitoring.

On the other hand, for institutions with dominant trading and collusion motives, high information asymmetry will amplify their effect of exacerbating the risk. Related studies indicate that the exacerbating effects of institutional ownership ratio, independent institutional investors' shareholdings and common institutional ownership on stock price crash risk are more prominent in firms with a high level of information asymmetry, lower information transparency or weak information environments [1, 8, 12].

3.3. Firm ownership type

Research incorporating China's institutional context demonstrates that the mitigating impact of institutional cross-ownership on stock price crash risk is stronger among state-owned enterprises (SOEs) [9]. Additional empirical research on common institutional ownership also supports this view [13]. The underlying mechanism is that SOEs have a basic governance framework for state-owned major shareholders, which makes it easier to form collaborative governance with institutional shareholders and amplify the effectiveness of institutional governance. Other scholars show that shareholdings by CSISC mitigate such risk, and such mitigating effect appears stronger in non-state-owned enterprises (non-SOEs) [10]. From this, it can be seen that the direction of ownership type boundary adjustment is not fixed and will change with the type of institutional investors (commercial institutional shareholders/regulatory minority shareholders).

4. External market and institutional environment

4.1. Market cycle

Studies confirm that if institutional investors have significant differences in information mining capabilities, such heterogeneity will mitigate stock price crash risk. Meanwhile, market cycles have a moderating effect on this process: Compared to bull markets, bear market conditions can amplify the mitigating effect. The internal logic is that during the bear market stage, negative news emerges in concentrated bursts, market panic sentiment spreads rapidly, and differentiated information processing capabilities among institutions can effectively alleviate herd selling behavior in the market; The overall bull market is dominated by optimistic sentiment, and the governance and risk-mitigating effects brought about by differentiated information mining by institutions will be diluted by market optimism [14]. From this, it can be seen that the bull-bear market cycle, as a macro boundary, will alter the extent to which institutional investors' information advantage influences the crash risk.

4.2. Degree of marketization

The degree of marketization comprehensively reflects the level of market-oriented economic development. Some scholars find that institutional investors tend to reduce stock price crash risk when a listed company is located in a region with high marketization. In regions with low marketization, these investors exert an exacerbating effect [15]. The reason is that the legal environment and information disclosure supervision in regions with high marketization are more perfect, and the supervisory function of institutional investors is easier to implement. However, in regions with insufficient marketization, institutional constraints are weak, and institutions are more likely to collude with management to seize benefits and exacerbate crash risk.

4.3. Capital market regulation and investor protection system

As a public welfare organization for the protection of securities investors, CSISC is an important supplementary force for capital market regulation. With the core goal of protecting small and medium-sized investors, it plays an external governance role as a regulatory minority shareholder by participating in shareholder meetings, public initiatives, and rights litigation of listed companies. Related studies find that shareholdings by CSISC effectively reduce stock price crash risk, and such impact becomes more pronounced among firms lacking sufficient external supervision [10].

Other research reveals that a strong investor protection mechanism and external supervision can amplify the risk-mitigating effect exerted by long-term institutional investors [2]. Empirical findings from a legal regulatory perspective show that the Anti-Monopoly Law of the People's Republic of China maintains favorable market order, eliminates collusive behavior of monopolistic firms, and thereby reduces the exacerbating effect of common institutional ownership on stock price crash risk [12].

4.4. Short selling mechanism

The short selling mechanism changes the constraints of market information transmission, allowing negative information from pessimistic investors to be reflected in stock prices, thereby changing the trading constraints and governance incentives of different institutional investors. Research finds that short selling mechanisms help stabilize the market and strengthen corporate governance. Such mechanisms enable stable institutional investors to exert stronger inhibitory effects on stock price crash risk and alleviate negative market impacts arising from transactional institutional investors [5].

5. Conclusion

This paper finds that institutional investment horizons, institutional investment behavior, and independence of institutions; internal governance level of the firm, firm information environment, and firm ownership type; market cycle, degree of marketization, capital market regulation and investor protection system, and short selling mechanism can change both the direction of institutional investors' effect on stock price crash risk (inhibition or exacerbation) and how strongly the different mechanisms operate.

On the basis of this literature review, future research directions are proposed. Firstly, promote research on the interaction effects of multiple boundary conditions. Existing research mostly tests the moderating effect of a single boundary in isolation. In the future, people can investigate how the effect changes when two or more types of boundary conditions coexist. For example, scholars can explore the interactions between institutional heterogeneity, firm micro-level characteristics, and the institutional environment. Secondly, future studies should dynamically trace the ongoing reforms in China's capital markets. With the full implementation of the registration system, the reform of the institutional investor team, the entry of the personal pension system into the market, and other capital market reform measures, firms' information environment, the structure of institutional investors, and external regulatory constraints will all change. Future research can explore how the moderating effects of various boundary conditions dynamically evolve with the reform of the capital market system.

References

- [1] Cao, F., Lu, B., Li, Z. G., & Xu, K. (2015). Can institutional investor reduce stock price crash risk? *Accounting Research*, (11), 55–61+97. <https://doi.org/10.3969/j.issn.1003-2886.2015.11.008>
- [2] Fu, F., Fang, J., Yang, M., & Yao, S. (2024). Institutional investor horizons and stock price crash risk. *Research in International Business and Finance*, 72, 102509. <https://doi.org/10.1016/j.ribaf.2024.102509>
- [3] Benkraiem, R., Goutte, S., Saadi, S., Zhu, H., & Zhu, S. (2022). Investor heterogeneity and negative skewness in stock returns: Evidence from institutional investors. *Journal of International Financial Markets, Institutions and Money*, 81, 101690. <https://doi.org/10.1016/j.intfin.2022.101690>
- [4] Niu, J. B., Wu, C., & Li, S. N. (2013). Institutional investor types, equity characteristics and voluntary disclosure. *Management Review*, 25(3), 48–59. <https://doi.org/10.14120/j.cnki.cn11-5057/f.2013.03.018>

- [5] Yang, M. Z., Zhao, X., & Zhang, W. H. (2020). Institutional investor heterogeneity, short-selling mechanism and the risk of stock price crash: Empirical evidence on Chinese listed corporation. *Accounting Research*, (7), 167–180. <https://doi.org/10.3969/j.issn.1003-2886.2020.07.013>
- [6] Brickley, J. A., Lease, R. C., & Smith, C. W. Jr. (1988). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics*, 20: 267–291. [https://doi.org/10.1016/0304-405X\(88\)90047-5](https://doi.org/10.1016/0304-405X(88)90047-5)
- [7] Zhang, J. J., Su, H., & Wang, P. (2017). Product market competition, institutional holdings and corporate R&D expenditure. *Management Review*, 29(11): 89–97. <https://doi.org/10.14120/j.cnki.cn11-5057/f.2017.11.008>
- [8] Liu, X. X., & Di, R. (2019). Heterogeneous institutional investors' shareholding and stock crash risk. *Modern Finance and Economics — Journal of Tianjin University of Finance and Economics*, 39(7): 3–21. <https://doi.org/10.19559/j.cnki.12-1387.2019.07.001>
- [9] Hou, C., & Liu, H. (2023). Institutional cross-ownership and stock price crash risk. *Research in International Business and Finance*, 65: 101906. <https://doi.org/10.1016/j.ribaf.2023.101906>
- [10] Ren, H., & Yan, F. (2022). Regulatory minority shareholders and stock price crash risk: Evidence from China Securities Investor Service Center's exercise of shareholding. *Journal of Nanjing Audit University*, 19(6): 91–100. <https://doi.org/10.3969/j.issn.1672-8750.2022.06.010>
- [11] Li, B., Liu, Z., Pittman, J., & Yang, S. (2024). Institutional dual holdings and expected crash risk: Evidence from mergers between lenders and equity holders. *Contemporary Accounting Research*, 41(3), 1819–1850. <https://doi.org/10.1111/1911-3846.12966>
- [12] Xiao, J., & Wang, H. J. (2024). Common ownership and stability of the stock market of China: Coordination in governance or collusion in market. *Journal of Nanchang University (Humanities and Social Sciences)*, 55(1), 70–83. <https://doi.org/10.13764/j.cnki.ncds.20231106.004>
- [13] Wu, C. X., & Deng, W. M. (2022). Common institutional ownership and the stock price crash risk: Promotion or inhibition. *Financial Theory & Practice*, (12), 91–104. <https://doi.org/10.3969/j.issn.1003-4625.2022.12.009>
- [14] Yin, H. Y., & Zhu, X. (2022). Information mining capabilities of institutional investors, herd behavior and stock price crash risk. *Journal of Management Sciences in China*, 25(2), 69–88. <https://doi.org/10.19920/j.cnki.jmsc.2022.02.004>
- [15] Dong, J. C., Pang, J. Q., Li, X. T., & Dong, Z. (2020). Exploring the relationship between institutional investor holdings and stock price crash risk: A test based on market variables. *Journal of Management Sciences in China*, 23(3), 73–88. <https://kns.cnki.net/reader/flowpdf?invoice=jxWpjKcN64loZMMTnisuOavZwQ9IQju4jjfyIsVXxZ3NVIdaeEekWOzxYNSyZh7nF2W1puwwA3jTuNwkT4HvLE8pvI2RPSjvmbzJivRr0FOPr0%2FMSM6zRaInMo0Cyn%2FfwHK8NF0wqCNTb6uIxjgZAp7KK1mKz1P4Uxl3eZKQ6A%3D&platform=NZKPT&sourcetype=nxgp&product=CJFQ&filename=JCYJ202003005&tablename=cjfdlast2020&type=JOURNAL&scope=trial&cflag=overlay&dflag=pdf&pages=&language=CHS&trial=&nonce=B6DD0D0C028D437A86AC1A9504CCCAB4>