



Does stock liquidity curb or fuel corporate financial fraud? Evidence from Chinese listed firms: A pre-registered report

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ABSTRACT

Stock liquidity is a defining feature of modern capital markets, yet its impact on corporate financial fraud remains unclear. This study investigates whether stock liquidity constrains or exacerbates corporate financial fraud among Chinese listed firms. Drawing on competing perspectives of external monitoring and managerial short-termism, we develop opposing predictions: liquidity may reduce fraud by improving price informativeness, external monitoring, and governance discipline, or increase fraud by intensifying short-term market pressure and incentives for opportunistic reporting. Using Chinese A-share firms from 2009 to 2023, we examine the association between stock liquidity and financial fraud and exploit the Shanghai-Hong Kong and Shenzhen-Hong Kong Stock Connect programs as quasi-natural shocks to market liquidity and investor access. The empirical design combines firm-level panel regressions, difference-in-differences analyses, mechanism tests, and robustness checks using alternative measures of liquidity and fraud. This study contributes to the literature on the governance consequences of stock liquidity and provides evidence relevant to market liberalization, investor protection, and corporate accountability in emerging capital markets.

1. Introduction

1.1. Brief background and context

Stock liquidity plays a central role in modern capital markets by facilitating trading activity, improving price efficiency, and enhancing the incorporation of information into stock prices. A growing body of research demonstrates that stock liquidity influences a wide range of corporate outcomes. For example, higher stock liquidity can strengthen governance mechanisms and managerial discipline (Edmans et al., 2013), improve corporate investment and production efficiency (Amihud and Levi, 2023), and enhance firms' climate performance (Muchenje, 2025). Against this backdrop, policymakers across both developed and emerging economies have consistently promoted market liberalization and greater market access to enhance liquidity and market quality. In China, reforms such as the Shanghai–Hong Kong Stock Connect and Shenzhen–Hong Kong Stock Connect have substantially increased market participation and accelerated the integration of Chinese capital markets with global financial systems (Z. Zhang et al., 2025).

Despite the widely recognized benefits of stock liquidity, its broader governance consequences remain subject to debate. On the one hand, greater liquidity may improve price informativeness and strengthen external monitoring, thereby enhancing managerial discipline and reducing opportunistic behavior (Edmans et al., 2013; Holmstr and Tirole, 1993). On the other hand, the ease of trading

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may attract transient investors with short investment horizons and increase managerial sensitivity to short-term market expectations, potentially encouraging myopic and opportunistic behavior (Coffee Jr, 1991; Fang et al., 2014). These competing perspectives suggest that the overall effect of stock liquidity on corporate misconduct remains theoretically ambiguous.

Corporate financial fraud is among the most serious forms of managerial opportunism because it involves the deliberate misrepresentation of financial information and violations of disclosure regulations. Such misconduct can mislead stakeholders' economic decisions, distort the efficient allocation of resources, weaken investor confidence, and undermine the integrity and healthy development of capital markets (Sun et al., 2025; Yin et al., 2025). In severe cases, financial fraud may also damage corporate reputation, trigger regulatory sanctions and litigation, and threaten firms' long-term viability (Yin et al., 2025). Understanding whether stock liquidity constrains or facilitates such behavior is therefore important for evaluating the broader governance consequences of liquid capital markets.

1.2. Research question

Although stock liquidity is widely regarded as an important determinant of corporate governance and managerial behavior, existing research provides competing predictions regarding its effect on corporate misconduct.

On the one hand, the governance theory argues that stock liquidity improves corporate governance by enabling informed investors to discipline managers through trading. Greater liquidity improves price informativeness, strengthens external monitoring, increasing analyst following, and accelerates the incorporation of information in stock prices (Edmans et al., 2013; Holmstr and Tirole, 1993). Under this view, managers face stronger market discipline and are less likely to engage in opportunistic or fraudulent activities. For example, Zhang et al. (2025) investigated that improved market monitoring can help constrain corporate opportunistic R&D manipulation.

On the other hand, short-termism theory highlights the potential dark side of stock liquidity. The ease of trading allows investors to exit easily, rather than actively monitor managers, thereby weakening long-term shareholder oversight (Coffee Jr, 1991). Higher liquidity, driven by lower transaction costs and greater trading efficiency, facilitates rapid entry into and exit from stocks, making them particularly attractive to transient institutional investors with short investment horizons and a strong emphasis on firms' short-term performance. As a result, liquid markets may intensify managerial sensitivity to short-term stock price movements and market expectations. Such pressure can encourage managers to conceal poor performance, manipulate accounting information, or engage in other forms of opportunistic reporting to avoid adverse market reactions. From this perspective, stock liquidity may not only serve as a governance mechanism but also induce managerial myopia and unethical corporate behavior.

Consequently, it remains unclear whether stock liquidity ultimately reduces or increases the likelihood of financial fraud.

Against this backdrop, this study addresses the following research question:

Does stock liquidity constrain or exacerbate corporate financial fraud?

To answer this question, the study examines whether the governance benefits associated with stock liquidity extend to severe forms of corporate misconduct, or whether liquidity-induced short-termism instead increases managers' incentives to engage in fraudulent financial reporting. Using Chinese listed firms as the empirical setting, this study seeks to provide evidence on the role of stock liquidity in shaping corporate financial fraud and to enhance our understanding of the governance consequences of liquid capital markets. Furthermore, this study exploits the Shanghai–Hong Kong and Shenzhen–Hong Kong Stock Connect programs as quasi-natural experiments to identify the causal impact of stock liquidity on corporate financial fraud.

2. Literature review and motivation

2.1. Three key papers

Several recent studies provide important insights into the governance consequences of market-based monitoring and investor oversight. Muchenje (2025) shows that higher stock liquidity improves corporate climate performance by strengthening investor monitoring and managerial accountability. Similarly, Zhang et al. (2025) find that stock market liberalization reduces opportunistic R&D manipulation by enhancing market discipline and external scrutiny. Extending this governance perspective, Yao and Xiao (2025) demonstrate that common ownership reduces corporate violations by strengthening monitoring incentives and facilitating information spillovers among institutional investors.

Taken together, these studies suggest that stronger market-based governance mechanisms can constrain corporate misconduct. However, existing research has largely focused on environmental performance, innovation-related misconduct, and general corporate violations. Much less is known about whether stock liquidity affects corporate financial fraud, a particularly severe form of managerial opportunism. This study seeks to fill this gap by examining the effect of stock liquidity on corporate financial fraud in the context of Chinese listed firms.

2.2. Broader literature

2.2.1. Stock liquidity and corporate governance

Stock liquidity can strengthen corporate governance by improving external monitoring and managerial discipline. It argues that liquid stock markets facilitate informed trading and enhance price informativeness, thereby improving governance efficiency. Maug (1998) proposes that stock liquidity encourages blockholder monitoring because liquid markets reduce the trading costs associated

with acquiring and unwinding ownership positions. Edmans et al. (2013) further argues that liquid markets strengthen governance through the threat of investor exit, as managers face stronger stock price and reputational consequences when investors can trade efficiently on information. Fang et al. (2009) show that firms with more liquid stocks exhibit higher firm value and better operating performance. Consistent with the governance role of liquidity, Chen et al. (2019) find that firms with higher stock liquidity engage in less extreme corporate tax avoidance, suggesting that liquidity enhances shareholder monitoring and constrains managerial opportunism. Furthermore, Zhang et al. (2025) document that improved market monitoring associated with higher stock liquidity helps constrain opportunistic R&D manipulation by managers.

Despite these governance benefits, stock liquidity may also generate unintended negative consequences. Highly liquid markets can intensify short-term market pressure and managerial myopia. Fang et al. (2014) show that greater stock liquidity reduces firm innovation because managers become more exposed to hostile takeover threats and pressure from short-term investors. Liquid markets may encourage managers to prioritize short-term performance over long-term investment in order to maintain stock prices and satisfy investor expectations. Consistent with this view, Chang et al. (2017) find that higher stock liquidity increases stock price crash risk by encouraging managers to withhold adverse information to avoid selling pressure from transient investors, thereby exacerbating short-termism and bad-news hoarding.

The governance implications of stock liquidity may be particularly important in emerging markets where internal governance mechanisms are relatively weaker and information asymmetry is more severe. In China, rapid capital market liberalization and increasing participation by institutional and foreign investors have substantially improved stock liquidity, potentially strengthening the role of external market discipline in constraining managerial opportunism and financial misconduct.

2.2.2. Corporate financial fraud

Corporate financial fraud represents one of the most severe forms of managerial opportunism because it involves intentional misrepresentation of a firm's financial condition, undermining investor trust, market integrity, and the efficient functioning of capital markets (Karpoff, 2021). Unlike conventional earnings management, which often remains within managerial accounting discretion, financial fraud typically involves violations of disclosure regulations and accounting standards through fabricated profits, fabricated assets, false or misleading disclosure, material omission, delayed disclosure, improper disclosure, and improper accounting treatment. These activities are classified as serious forms of fraudulent financial reporting because they intentionally mislead investors and distort firms' true economic conditions (Yin et al., 2025).

Corporate financial fraud is influenced by both external and internal governance mechanisms. External governance mechanisms help constrain fraudulent behavior by increasing monitoring intensity and improving the information environment. Regulatory oversight increases the expected costs of misconduct (Kedia and Rajgopal, 2011), analyst attention (Ren et al., 2022) and media scrutiny (Jiang et al., 2022) strengthen external monitoring by facilitating information dissemination and increasing the likelihood that irregularities are detected, and short-selling mechanisms (Lu et al., 2024) can effectively constrain fraudulent corporate behavior by increasing the probability of detection and punishment. In general, a stronger external governance environment improves transparency and limits managerial opportunities to conceal misconduct.

Internal governance mechanisms also play an important role in influencing firms' propensity to engage in fraud. Corporate fraud is shaped by several internal governance factors, including ownership structure, managerial incentives, and board characteristics. Ownership structure has limited influence on corporate fraud (Chen et al., 2006). However, common ownership can reduce corporate violations by facilitating information sharing and strengthening monitoring incentives among institutional investors (Yao and Xiao, 2025). Managerial characteristics may also affect misconduct. CEOs are more likely to engage in financial misconduct after being publicly recognized as outstanding business leaders, suggesting that reputational status may induce managerial overconfidence and weaken ethical constraints (Li et al., 2022). Board characteristics constitute another important governance mechanism. Firms with greater board independence are less likely to engage in fraudulent reporting because stronger board oversight enhances managerial accountability (Neville et al., 2019). Conversely, weak governance structures may provide managers with greater opportunities to conceal misconduct and engage in fraudulent activities.

2.3. Motivation

Despite substantial improvements in market regulation and disclosure requirements, corporate financial fraud remains a persistent concern in capital markets. Financial fraud undermines the credibility of financial reporting, distorts resource allocation, weakens investor confidence, and threatens the integrity of capital markets (Sun et al., 2025; Yin et al., 2025). Financial fraud continues to impose high costs on investors, regulators, and society despite ongoing efforts to improve corporate governance and market transparency.

The issue remains particularly relevant in China. In response to growing concerns regarding financial misconduct among listed firms, Chinese regulators have intensified anti-fraud enforcement in recent years. Following the State Council's 2024 initiative to strengthen the anti-fraud framework, the China Securities Regulatory Commission (CSRC) substantially increased investigations and penalties against financial reporting violations. Since 2024, the CSRC has investigated 159 financial fraud cases, imposed administrative penalties in 111 cases, and transferred 112 suspected criminal cases for criminal prosecution.¹

¹ <https://www.chinadaily.com.cn/a/202601/06/WS695ca545a310d6866eb32423.html>

Recent high-profile fraud cases further highlight the severity of the problem. For example, in 2024 the CSRC imposed a record penalty on Hengda Real Estate, the principal subsidiary of China Evergrande Group, after determining that the company had materially inflated revenues and issued bonds based on falsified financial statements. The case resulted in substantial financial penalties, market sanctions, and lifetime bans for senior executives. These events illustrate that financial fraud remains a significant challenge even amid increasing regulatory scrutiny. Against this backdrop, understanding the determinants of corporate financial fraud has become increasingly important. While stock liquidity has been widely recognized as an important feature of modern capital markets and a key outcome of market liberalization reforms, its implications for severe forms of corporate misconduct remain unclear.

The Mainland–Hong Kong Stock Connect program offers a compelling quasi-natural experiment to study the causal effect of stock market liquidity on corporate fraud because it represents a large, policy-driven, and plausibly exogenous shock to trading activity and investor composition that is orthogonal to firm-level misconduct. Initiated in 2014 (Shanghai) and expanded in 2016 (Shenzhen), the program introduced a staggered and externally imposed increase in market access that allowed foreign and Mainland investors to trade a predefined subset of eligible firms based on objective criteria such as size and index inclusion rather than endogenous firm behavior. This generates a clear treated group (eligible firms) and control group (non-eligible firms), enabling difference-in-differences identification. Crucially, the program alters multiple dimensions linked to liquidity—trading volume, ownership structure, analyst coverage, and price informativeness—while leaving fundamental firm characteristics largely unchanged in the short run. As a result, Stock Connect converts liquidity from an equilibrium outcome into an exogenous institutional shock, allowing us to isolate its net effect on fraud and disentangle competing mechanisms such as enhanced monitoring, reduced governance through exit, and increased managerial short-termism.

3. Theory/hypothesis development (idea)

3.1. Stock liquidity and corporate financial fraud: The monitoring perspective

Stock liquidity could strengthen external governance mechanisms by encouraging investor participation and reducing the costs associated with acquiring and unwinding ownership positions (Maug, 1998). Lower trading costs facilitate blockholder formation by making it easier for investors to accumulate meaningful ownership stakes and engage in monitoring activities. Once established, blockholders can influence managerial behavior through both voice and exit mechanisms. The voice mechanism operates through direct intervention, engagement, and monitoring of managerial decisions, whereas the exit mechanism disciplines managers through the threat of selling shares when performance deteriorates. Because stock prices respond to informed trading, managers have incentives to avoid actions that may trigger blockholder exit and subsequent declines in firm value (Edmans, 2009; Edmans et al., 2013). Enhanced monitoring increases the probability that managerial misconduct will be detected and penalized, thereby increasing the expected costs of opportunistic behavior. More liquid markets also facilitate information production and dissemination, strengthening managerial discipline and improving corporate governance. For example, enhanced market monitoring associated with stock market liberalization constrains opportunistic corporate behavior by improving external oversight and reducing managers' ability to manipulate corporate activities (Z. Zhang et al., 2025).

These monitoring benefits are particularly important in the context of financial fraud. Financial fraud relies heavily on information asymmetry, opaque disclosure practices, and the concealment of unfavorable information. Improvements in information transparency and external monitoring reduce managers' ability to exploit informational advantages and increase the likelihood that fraudulent activities will be detected. Greater transparency also strengthens stakeholder scrutiny and improves the overall information environment, reducing opportunities for financial misrepresentation (Sun et al., 2025; Yin et al., 2025). Consequently, the governance and monitoring benefits of stock liquidity are expected to reduce managers' incentives and opportunities to engage in fraudulent reporting.

Accordingly, the monitoring perspective predicts that higher stock liquidity reduces the likelihood of corporate financial fraud.

H1. Higher stock liquidity is associated with lower levels of corporate financial fraud.

The governance benefits of stock liquidity are expected to be stronger when firms are subject to greater external monitoring. Institutional investors and financial analysts serve as important intermediaries, collecting, processing, and disseminating firm-specific information. Their monitoring activities enhance transparency, reduce information asymmetry, and constrain managerial discretion. Stronger external monitoring increases the likelihood that managerial misconduct will be detected and penalized, thereby discouraging opportunistic behavior (Dyck et al., 2010; Yu, 2008). Financial analysts are particularly important monitors because their information production and scrutiny improve the information environment and increase managerial accountability. In the Chinese context, analyst monitoring has been shown to deter corporate fraud by increasing the probability that fraudulent activities are identified and exposed (J. Chen et al., 2016). Because stock liquidity facilitates information production and strengthens market-based monitoring, its governance benefits should be more pronounced when firms are already subject to stronger external scrutiny. Consequently, the fraud-reducing effect of stock liquidity is expected to be stronger when external monitoring is high.

H1a. The negative effect of stock liquidity on corporate financial fraud is more pronounced when firms are subject to higher analyst coverage.

The governance benefits of stock liquidity are expected to be stronger when common ownership is higher. Common ownership arises when institutional investors simultaneously hold equity stakes in multiple firms. Because common owners are exposed to the performance of a portfolio of firms rather than a single company, they possess stronger incentives to monitor managerial behavior and promote value-enhancing corporate policies. Common ownership also facilitates information sharing and information spillovers across

portfolio firms, improving investors' ability to evaluate managerial actions and identify potential misconduct (He and Huang, 2017).

Enhanced monitoring by common owners increases managerial accountability and raises the expected costs of opportunistic behavior. Compared with dispersed shareholders, common owners often possess greater resources, expertise, and incentives to collect firm-specific information and engage in governance activities. Through voting, engagement, and ongoing oversight, common owners can exert meaningful influence on managerial decision-making and corporate conduct. The governance role of common ownership has received increasing attention in recent years, as overlapping ownership structures create stronger incentives for investors to monitor managers and protect portfolio value (Azar et al., 2018). Recent evidence from China further indicates that common ownership reduces corporate violations by strengthening investor monitoring incentives and facilitating information spillovers among firms (Yao and Xiao, 2025).

Because stock liquidity improves information production and strengthens market-based governance mechanisms, its monitoring benefits should be more pronounced when firms are subject to greater oversight from common owners. Consequently, stock liquidity is expected to have a stronger fraud-reducing effect in firms with higher levels of common ownership.

H1b. The negative effect of stock liquidity on corporate financial fraud is more pronounced when common ownership is higher.

3.2. Stock liquidity and corporate financial fraud: The short-termism perspective

In contrast, the short-termism view suggests that stock liquidity may increase managerial incentives to engage in opportunistic behavior. While liquid markets facilitate trading and improve market efficiency, they also lower transaction costs and enable investors to exit their positions more easily. As a result, shareholders may choose to sell their shares rather than actively monitor management, weakening long-term governance mechanisms (Coffee Jr, 1991). In addition, higher liquidity tends to attract transient institutional investors with relatively short investment horizons and a strong focus on short-term stock performance (Fang et al., 2014).

The presence of transient investors can intensify managerial sensitivity to stock price movements and market expectations. Managers often face substantial pressure to maintain favorable market valuations because stock prices influence compensation, career prospects, and access to external financing. Under such circumstances, managers may prioritize short-term performance over long-term value creation. Market pressures associated with stock valuation concerns can encourage earnings manipulation, the concealment of unfavorable information, and other forms of opportunistic reporting behavior (Burns and Kedia, 2006; Efendi et al., 2007). Consistent with this view, greater stock liquidity has been shown to increase stock price crash risk by encouraging managers to withhold adverse information in response to pressure from transient investors, thereby exacerbating short-termism and bad-news hoarding (Chang et al., 2017).

Financial fraud represents an extreme form of opportunistic reporting behavior. Unlike conventional earnings management, financial fraud involves deliberate violations of accounting standards and disclosure regulations that misrepresent a firm's underlying economic condition. Such misconduct misleads stakeholders' economic decisions, distorts the efficient allocation of resources, weakens investor confidence, and undermines the integrity and healthy development of capital markets (Sun et al., 2025; Yin et al., 2025). Because financial fraud relies heavily on the concealment of unfavorable information and the exploitation of information asymmetry, managers may have stronger incentives to misrepresent financial information when failing to meet market expectations could trigger substantial stock price declines. In highly liquid markets, where stock prices respond rapidly to new information, and investors can exit positions at low cost, these pressures may become particularly pronounced. Consequently, stock liquidity may increase the likelihood that managers engage in severe forms of opportunistic reporting behavior, including corporate financial fraud.

H2. Higher stock liquidity is associated with higher levels of corporate financial fraud.

The positive association between stock liquidity and corporate financial fraud is expected to be stronger when managerial compensation is more closely tied to stock market performance. Higher pay-performance sensitivity increases the extent to which managerial wealth depends on stock prices, making managers more vulnerable to adverse market reactions (Edmans et al., 2013). Because stock liquidity facilitates rapid trading and accelerates the incorporation of information into stock prices, managers in liquid markets face stronger pressure to maintain favorable valuations and meet investors' expectations. This pressure is particularly pronounced when managerial wealth is highly sensitive to stock price fluctuations, as stock price declines directly reduce managers' personal wealth and compensation. Consequently, managers may have stronger incentives to conceal unfavorable information, delay the disclosure of bad news, or manipulate financial reports to avoid negative market reactions. Greater stock-price sensitivity also increases the consequences of market discipline and shareholder exit, making managerial welfare more dependent on short-term market performance (Edmans et al., 2013). Consistent with this view, executives involved in financial reporting fraud exhibit significantly stronger equity incentives than non-implicated executives and executives in non-fraud firms (Davidson, 2022). Accordingly, the short-termism effect of stock liquidity is expected to be amplified when CEO pay-performance sensitivity is high.

H2a. The positive effect of stock liquidity on corporate financial fraud is more pronounced when CEO pay-performance sensitivity is high.

The positive association between stock liquidity and financial fraud is expected to be stronger when investor sentiment is high. Elevated investor sentiment increases market optimism regarding firms' future performance and growth prospects, leading to higher valuations and stronger performance expectations. Under such conditions, managers face greater pressure to sustain favorable market perceptions and avoid disappointing investors. Failure to meet these expectations may trigger substantial stock price declines, particularly in liquid markets where information is rapidly incorporated into prices. Consequently, managers may become more

willing to delay the disclosure of unfavorable information, conceal poor performance, or engage in opportunistic reporting behavior to preserve favorable valuations. Optimistic investor sentiment has been shown to increase incentives for corporate misconduct and information concealment, particularly when managers seek to maintain market expectations and avoid negative investor reactions (Schrand and Zechman, 2012; Zhang et al., 2026). Because financial fraud relies heavily on the concealment of adverse information and the exploitation of information asymmetry, heightened investor optimism may further strengthen managers' incentives to engage in fraudulent reporting (Sun et al., 2025; Yin et al., 2025). Accordingly, the short-termism effect of stock liquidity is expected to be amplified when investor sentiment is high.

H2b. The positive effect of stock liquidity on corporate financial fraud is more pronounced when investor sentiment is high.

4. Empirical design (data and tools)

4.1. Data

This study focuses on A-share firms listed on the Shanghai and Shenzhen Stock Exchanges in China from 2009 to 2023. We exclude firms in the financial industry, observations subject to Special Treatment (ST or *ST), and firms with missing values. The data on corporate financial fraud are obtained from the China Stock Market & Accounting Research (CSMAR) database, which compiles regulatory enforcement announcements released by the China Securities Regulatory Commission (CSRC), the Shanghai Stock Exchange, the Shenzhen Stock Exchange, the Ministry of Finance, and other supervisory institutions. Specifically, this study focuses on financial fraud-related violations, including false disclosure, accounting misrepresentation, and other forms of fraudulent financial reporting. Data on stock liquidity, firm-level financial indicators, and corporate governance characteristics are also collected from the CSMAR database. To mitigate the influence of outliers, all continuous variables are winsorized at the 1st and 99th percentiles.

4.2. Variables

4.2.1. Stock liquidity

Following prior literature, this study measures stock liquidity using the annual illiquidity ratio proposed by Amihud (2002), as shown in Eq. (1):

$$ILLIQ_{i,t} = \frac{1}{Days_{i,y}} \sum_{d=1}^{Days_{i,y}} \frac{|R_{i,y,d}|}{Volume_{i,y,d}} \quad (1)$$

$$Liquidity_{i,t} = -\ln(ILLIQ_{i,t}) \quad (2)$$

where $R_{i,y,d}$ represents the return rate of stock i on day d of year y , $Volume_{i,y,d}$ denotes the corresponding daily trading volume of stock i on the trading day of year y , and $Days_{i,y}$ indicates the number of trading days of stock i in year y . Since a higher $ILLQ$ indicates higher transaction costs and lower stock liquidity, this study defines stock liquidity (*Liquidity*) as the natural logarithm of annual $ILLQ$ multiplied by -1 (Chung and Chuwonganant, 2014), as shown in Eq. (2). Thus, a higher *Liquidity* value indicates greater stock liquidity.

4.2.2. Corporate financial fraud

Corporate financial fraud refers to the intentional misrepresentation of a firm's financial condition through the manipulation of financial statements and the concealment, distortion, or delayed disclosure of material information. According to the CSRC, financial fraud includes false or misleading statements, material omissions, and unfair information disclosure. Following the classification criteria of the CSMAR database, this study identifies financial fraud based on announcements issued by regulatory authorities or listed companies and classifies it into seven categories: fictitious profits, fictitious assets, false or misleading disclosure, material omissions, delayed disclosure, improper disclosure, and improper accounting treatment.

The primary dependent variable is *Fraud*, defined as the annual number of financial fraud violations committed by a firm during a given fiscal year. A higher value of *Fraud* indicates more severe financial misconduct and greater ethical risk.

4.2.3. Control variables

This study selects leverage (*Leverage*) as the ratio of the book value of total liabilities to total assets to capture firms' reliance on external financing, firm size (*Size*) as an indicator of firm scale - logarithm of Total Assets, firm age (*Age*) to capture the firm's maturity, firm growth (*Growth*) reflect past expansion dynamics, market to book ratio (*MtB*) to capture the firm's growth opportunities, return on assets (*ROA*) to measure profitability, past stock returns (e.g., 12-month return, *Return*) and stock return volatility (standard deviation of returns, *Volatility*).

For robustness use, we apply governance-related variables such as the state-owned enterprises indicator (*SOE*) to account for state ownership, CEO-board chair duality (*Duality*) to assess the separation of roles, top 10 shareholders' shareholding ratio (*Top10*) to measure ownership concentration among the top shareholders, board size (*Board*) as an indicator of internal governance, and independent director (*IndDirector*) to reflect board independence.

4.3. Empirical strategy

4.3.1. Baseline regression model

The following benchmark model is constructed to examine the effect of stock liquidity on corporate financial fraud. In Eq. (3), we use lagged independent variables to address the potential reverse causality:

$$Fraud_{i,t} = \beta_0 + \beta_1 Liquidity_{i,t-1} + \gamma' X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (3)$$

where $Fraud_{i,t}$ is the annual number of financial fraud violations committed by firm i in year t , $Liquidity_{i,t}$ indicates stock liquidity in firm i in year t , $\gamma' X_{i,t-1}$ represents a set of control variables, μ_i and λ_t capture firm- and year-fixed effects, $\varepsilon_{i,t+1}$ is the error term.

The study exploits the introduction of the mainland–Hong Kong Stock Connect program as a quasi-natural experiment to examine the causal effect of stock market liquidity on corporate fraud. The reform imposed a discrete and plausibly exogenous increase in investor access, trading activity, and market liquidity for a subset of eligible firms.

Eligibility for Stock Connect is determined by transparent and largely mechanical criteria, such as index constituency, market capitalization, and liquidity thresholds, rather than firm-specific governance characteristics or misconduct risk. As a result, inclusion in the program is unlikely to be driven by firms' underlying propensity to engage in fraud. This institutional feature provides a credible source of exogenous variation in stock liquidity. We therefore interpret the introduction of Stock Connect as a policy-induced liquidity shock that differentially affects treated (eligible) firms relative to otherwise comparable non-eligible firms.

Our empirical design combines a difference-in-differences (DiD) framework with firm and time fixed effects and further utilizes the policy shock as an instrumental variable to isolate the causal effect of liquidity on corporate fraud.

We also estimate the reduced form impact of the Stock Connect program on corporate fraud using the following DiD specification:

$$Fraud_{it} = \alpha + \beta(Connect_i \times Post_t) + \gamma' X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{it} \quad (4)$$

where $Fraud_{it}$ is a measure of corporate misconduct for firm i in year t , including indicators for regulatory enforcement actions, financial restatements, or continuous measures such as discretionary accruals. $Connect_i$ is an indicator equal to one for firms eligible for trading through Stock Connect, and $Post_t$ equals one for periods after the program's implementation. The coefficient of interest, β , captures the average treatment effect of the liquidity shock on corporate fraud.

As before, the specification includes firm fixed effects (μ_i) to control for time-invariant heterogeneity across firms, and time fixed effects (λ_t) to absorb aggregate shocks. The vector X_{it} includes standard firm characteristics such as size, leverage, profitability, growth opportunities, and return volatility. Standard errors are clustered at the firm level.

4.3.2. Difference-in-differences estimation

To establish that Stock Connect indeed affects market liquidity, we estimate the following first-stage specification:

$$Liquidity_{it} = \alpha + \delta(Connect_i \times Post_t) + \gamma' X_{i,t-1} + \mu_i + \lambda_t + u_{it} \quad (5)$$

where $Liquidity_{it}$ denotes the liquidity measure. We expect $\delta > 0$, consistent with an increase in liquidity following inclusion in the program. This step verifies the relevance condition.

4.3.3. Instrumental variable estimation

To isolate the causal effect of liquidity on corporate fraud, we implement an instrumental variables (IV) approach using Stock Connect eligibility as an instrument for firm-level liquidity. The first stage is given above. The second-stage specification is:

$$Fraud_{it} = \alpha + \theta \times \widehat{Liquidity}_{i,t-1} + \gamma' X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{it} \quad (6)$$

where we use the predicted value of liquidity from the first stage. The coefficient θ captures the causal effect of liquidity on corporate fraud. A negative θ implies that increased liquidity reduces fraud (monitoring dominates), while a positive θ suggests that liquidity facilitates misconduct.

The validity of this approach relies on the assumption that the Stock Connect program affects corporate fraud only through its impact on market liquidity and related informational and governance channels, rather than through direct effects on firm behavior unrelated to trading conditions.

4.3.4. Moderating effects

This section examines whether the effect of stock liquidity on corporate financial fraud varies across different monitoring and governance conditions, including analyst coverage, common ownership, CEO pay-performance sensitivity, and investor sentiment.

4.4. Robustness tests

To mitigate further endogeneity concerns and ensure the robustness of our baseline findings, this study conducts several additional robustness checks, as outlined below.

4.4.1. Tests of the parallel trends assumption

To ensure the validity of the difference-in-differences estimation, we first conduct a parallel trend test. The DID approach relies on the identifying assumption that, in the absence of the Stock Connect policy, the treatment and control groups would have followed similar trends in corporate financial fraud. By examining the dynamic effects before and after the policy implementation, we test whether there are significant differences in pre-treatment trends between the two groups. Insignificant pre-policy coefficients would support the validity of the parallel trends assumption and strengthen the credibility of our causal interpretation.

4.4.2. Placebo test

To further verify the robustness of the baseline results, we conduct a placebo test by artificially assigning the policy intervention to a period prior to the actual implementation of the Stock Connect programs and re-estimating the baseline model. If the placebo treatment does not generate significant effects on corporate financial fraud, it would suggest that the main findings are unlikely to be driven by spurious correlations, omitted variables, or pre-existing trends.

4.4.3. PSM-DID test

To further address potential selection bias arising from systematic differences between treatment and control firms, this study adopts a propensity score matching combined with difference-in-differences (PSM-DID) approach. Specifically, firms in the treatment group are matched with observationally similar firms in the control group based on firm characteristics prior to policy implementation. We then re-estimate the DID model using the matched sample to examine whether the Stock Connect policy continues to affect corporate financial fraud after controlling for observable heterogeneity.

4.4.4. Alternative measures of stock liquidity

As an additional robustness check, we replace the primary stock liquidity proxy with alternative liquidity measures. Specifically, besides the Amihud illiquidity ratio, we employ the turnover ratio and zero-return illiquidity as alternative proxies for stock liquidity. These alternative measures allow us to verify whether the baseline findings are sensitive to the choice of liquidity proxy.

4.4.5. Alternative measures of corporate financial fraud

To further validate our findings, we adopt alternative measures of corporate financial fraud. In addition to *Fraud*, which captures the annual number of financial fraud violations, we employ *FraudDummy*, a dummy variable equal to 1 if a firm commits at least one financial fraud violation during a given year and 0 otherwise. This alternative specification enables us to test whether the results remain consistent under both continuous and binary measures of corporate misconduct.

4.4.6. Controlling for alternative channels

Given that the Stock Connect programs may influence firms through channels other than stock liquidity, this study further controls for several alternative mechanisms. In particular, we control for foreign ownership and information-environment variables to examine whether the observed effect of Stock Connect on corporate financial fraud operates primarily through stock liquidity rather than through other concurrent governance improvements associated with market liberalization.

5. Conclusion

5.1. What's new?

This study examines the relationship between stock liquidity and corporate financial fraud from the perspective of market discipline and corporate misconduct. Prior research has primarily examined the effects of stock liquidity on firm value, investment efficiency, innovation, tax avoidance, and other corporate outcomes. In contrast, this study focuses on financial fraud, a severe form of unethical managerial behavior and disclosure misconduct.

The study is novel in two respects. First, it develops and tests two competing theoretical perspectives within a unified framework. The monitoring view predicts that stock liquidity reduces fraud by improving price informativeness, external scrutiny, and managerial discipline. The short-termism view predicts that stock liquidity increases fraud by intensifying market pressure and encouraging opportunistic reporting. Second, the study exploits the Shanghai-Hong Kong and Shenzhen-Hong Kong Stock Connect programs as policy shocks to market access, liquidity, and investor participation, allowing for a stronger assessment of the relationship between liquidity and corporate financial fraud.

5.2. So what?

The study has important implications for regulators, investors, and policymakers. For regulators, the findings will help clarify whether more liquid capital markets strengthen corporate discipline or create unintended incentives for opportunistic reporting. For investors, the study provides evidence on whether highly liquid stocks are associated with lower governance risk or greater exposure to financial misconduct. For policymakers, the results will inform debates on market liberalization by showing whether policies that improve trading efficiency also improve corporate accountability. More broadly, the study speaks to a central policy trade-off in emerging capital markets: how to promote market efficiency and investor participation while maintaining financial reporting integrity and investor protection.

5.3. Contribution

This study makes three contributions. First, it extends the stock liquidity literature by linking market microstructure to corporate ethical behavior and financial misconduct. While prior research has examined the effects of liquidity on firm value, investment, innovation, crash risk, and tax avoidance, this study examines whether liquidity affects corporate financial fraud.

Second, it contributes to the corporate governance and misconduct literature by examining the competing governance consequences of stock liquidity. By testing both the monitoring and short-termism mechanisms, the study provides a more nuanced understanding of how liquid capital markets shape managerial incentives and the risk of misconduct.

Third, it contributes to research on capital market liberalization in China. By exploiting the Stock Connect programs as quasi-natural policy shocks, the study provides evidence on how increased market access, liquidity, and investor participation affect corporate financial fraud in an emerging market setting.

5.4. Other considerations

The study is feasible because the required data are available from established databases. Financial fraud records, stock liquidity measures, firm-level financial indicators, and corporate governance variables can be obtained from CSMAR and related data sources. To strengthen the credibility of the empirical design, the study will conduct a series of pre-specified robustness and supplementary analyses. These include alternative measures of stock liquidity and financial fraud, placebo tests, parallel-trend tests, PSM-DID estimation, lagged specifications, and additional controls for concurrent channels, such as foreign ownership and the information environment. The study will also examine heterogeneity across ownership structure, external monitoring intensity, governance characteristics, and regulatory environments to provide a more nuanced understanding of when stock liquidity constrains or facilitates corporate financial fraud.

CRedit authorship contribution statement

Dehua Xia: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Dániel Havran:** Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing – original draft, Writing – review & editing.

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