Research on the Impact of the Registration Reform on the Capabilities of NEEQ-Listed Companies

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Abstract. In recent years, China has introduced registration reforms across various market segments like Shanghai and Shenzhen main boards, the STAR Market, the ChiNext Market, and the NEEQ (National Equities Exchange and Quotations). Although there is some significant research exists on the effects of these reforms on major stock exchanges, there is limited focus on their impact on the profitability of companies on NEEQ. The study examines how registration-based reform influences the profitability of NEEQ-listed firms in order to address this gap. Using the Difference-in-Differences (DID) method, this research evaluates the causal effects of the reform on corporate profitability. To ensure robustness, parallel trend analysis is conducted to verify the DID results. Furthermore, a heterogeneity analysis explores whether the company age can influence the outcomes or not. The findings indicate that registration-based reform has not had a statistically significant impact on the profitability of NEEQ-listed companies. These results suggest that while structural reforms aim to enhance market efficiency and transparency, their immediate effects on smaller or emerging-market segments may differ from those observed in large. This study contributes valuable insights to policymakers and investors focused on China's evolving capital markets.

Keywords: Capital Market Reform, Corporate Profitability, Difference-in-Differences(DID), NEEQ-listed Companies, Market Efficiency

1 Introduction

In recent years, China has been promoting registration system reform in its capital markets. The purpose is to make resource allocation more efficient, strengthen core market mechanisms, and boost transparency and inclusiveness. The reform is a milestone in the ongoing transformation of financial markets in China. The pilot phase of the registration system began on the STAR Market in 2019. After that, China gradually expanded the reform to the ChiNext Market, the Beijing Stock Exchange, and the Main Board Market. A pilot program was also introduced on the New Third Board (NEEQ) in 2019. By 2023, the system was formally adopted across the NEEQ platform. These changes signify a fundamental shift in China’s capital markets, moving away from the

H. Sun et al. (eds.), *Proceedings of the 2025 10th International Conference on Social Sciences and Economic Development (ICSSED 2025)*, Advances in Economics, Business and Management Research 332,
https://doi.org/10.2991/978-94-6463-734-2_57

old approval system. There is a full embracing of a more market-oriented registration-based approach.

Zhang Wenqian and her colleagues (2024) pointed out that factors such as the underdeveloped capital market, imbalanced investor structure, and widespread speculation in new stock offerings have contributed to an increase in IPO premium rates following the implementation of the registration system on the ChiNext Market [1]. Additionally, the successful demonstration effect of the STAR Market's registration reform and investors' pursuit of speculative arbitrage have significantly driven IPO underpricing on the ChiNext Market after the reform. Cheng (2024) argued that the introduction of the registration system would lead economic development towards an innovation-driven transformation and play a significant role in establishing and improving capital market institutional frameworks [2]. Ding Fangfei and her colleagues (2024), through their study of IPO companies in the A-share market, found that the market-making reform has improved investment efficiency by alleviating financing constraints and enhancing information disclosure quality [3].

While many researchers have explored the impacts of China's registration system reform, most studies have focused on the entire Chinese stock market or specifically on the STAR Market, ChiNext Market, and the Main Board. Therefore, there is relatively limited research on the influence of registration system reform on NEEQ. However, the paper aims to make up for the theoretical gap and investigate the impact of the registration system reform on the profitability of NEEQ-listed companies. In the research, there is a Difference-in-Differences (DID) model established to compare the overall impact of the registration-based reform on the STAR Market, ChiNext Market, and New Third Board with its specific impact on the New Third Board. This will serve as a control experiment to determine whether the registration reform obviously affects the profitability of enterprises listed on the New Third Board. Additionally, there is a heterogeneity analysis which will be conducted to examine whether differences in enterprise ownership structure and firm size lead to varying impacts of the reform on the profitability of New Third Board enterprises. This study aims to provide a systematic and empirical analysis of the relationship between NEEQ enterprises' profitability and capital market institutional reforms, which can fill a gap in the existing research. Furthermore, the findings will offer policymakers scientific evidence to optimize the registration-based system reform and improve market regulation.

2 Literature Review

Liu Shuai argued that the registration-based IPO system reform is a significant institutional innovation in China's capital market, aiming at improving resource allocation efficiency, lowering the threshold for companies to go public, and strengthening the decisive role of the market in resource distribution [4]. This reform was first piloted on the Star Market and gradually extended to the ChiNext Market and NEEQ, establishing a market-oriented review mechanism centered on information disclosure. Zeng Quan and his colleagues pointed out that the reform emphasizes truthful, complete, and timely

disclosure of corporate information, reducing information asymmetry and regulatory arbitrage while optimizing the capital market's ecosystem.

Zeng Quan and his colleagues highlighted that the reform contributes to lowering earnings management levels and promoting accounting conservatism. These results enhance the quality of financial reporting and foster greater investor confidence [5].

Wang Lei examined the effects of the registration reform on companies which are listed on the NEEQ market. As a result, he found some notable differences in outcomes. Although some firms benefited from enhanced transparency and more efficient financing channels, the impact varied depending on their corporate governance structures and adaptability to market changes. In the early stages, certain companies experienced noticeable improvements in profitability. However, long-term challenges remain, like intensified competition and unstable profit models [6].

Current research on the registration reform largely focuses on the Sci-Tech Innovation Board and the ChiNext Market with relatively little empirical analysis of NEEQ enterprises, particularly regarding differences in corporate profitability across industries that are on the NEEQ market. Future studies should improve this by considering industry-specific characteristics and firm-level differences, allowing for a more detailed empirical investigation. What's more, greater emphasis should be placed on the profitability and sustainable growth of companies operating under the registration system.Bottom of Form

3 Theoretical Analysis and Research Hypothesis

The purpose of China's registration reform is to simplify the listing process for enterprises, lower listing thresholds and strengthen information disclosure requirements. Therefore, registration reform can improve the efficiency and transparency of the capital market. For companies listed on the New Third Board, this reform can influence profitability through several mechanisms:

Firstly, by lowering the listing threshold, the reform allows more NEEQ companies to access direct financing from the capital market. This improved financial support enables enterprises to expand production capacity and invest in technological innovation, both of which can drive profitability. Liu Shuai's research (2023) indicates that the registration reform significantly boosts corporate financing capabilities, which leads to positive effects on overall profitability [4].

Secondly, information disclosure requirements have become more rigorous under the registration system, leading to greater market transparency. This encourages NEEQ companies to strengthen their corporate governance and improve operational efficiency to remain competitive in a more transparent and dynamic market environment. Enhanced competitiveness allows companies to secure larger market shares and boost profitability. Zeng Mingxuan's research (2014) shows that the registration reform significantly improves corporate competitiveness, which contributes to increased profitability [8].

Thirdly, the registration reform places significant importance on information disclosure. Companies are required to provide true and accurate information, which helps

reduce information asymmetry and build investor confidence. This transparency also supports a more accurate valuation of corporate value, ultimately contributing to improved profitability. Wang Guojian (2023) suggests that enhanced information disclosure under the registration system positively impacts corporate profitability [7].

In summary, this paper proposes the following four research hypotheses:

H1: The registration reform will have no impact on the profitability of NEEQ-listed companies.

H2: The nature of the enterprise will affect the impact of the registration reform on corporate profitability.

H3: The size of the enterprise will affect the impact of the registration reform on corporate profitability.

H4: The registration reform will affect corporate profitability by influencing board remuneration.

4 Empirical Research Design

4.1 Model Construction and Variable Selection

China's registration reform has gradually expanded across several markets like the STAR Market, the ChiNext Market, the Beijing Stock Exchange and the main boards of the Shanghai and Shenzhen Stock Exchanges. The process began on October 25, 2019 when the China Securities Regulatory Commission (CSRC) introduced a comprehensive reform of the NEEQ. This reform brought in public offerings and the registration system, marking the first steps toward implementing the registration-based system on the NEEQ. And on February 1, 2023, the CSRC announced the full implementation of the registration reform of NEEQ. In a way, the progressive nature of this reform created a unique, almost experimental environment that works well for research purposes. Drawing inspiration from the methods used by Mao Jie (2017), this study sets up a Difference-in-Differences (DID) model [9]. The goal is to dig into how this registration-based reform has influenced the profitability of companies listed on the NEEQ.

$$\Delta Performance_{i,j,t} = \alpha_j + \beta_1 \times Treat_i + \beta_2 \times Post_t + \beta_3 \times Registration_{i,t} + \gamma X_{i,j,t} + \eta_t + \varepsilon_{i,j,t} \quad (1)$$

Since the registration-based reform was partially rolled out in the NEEQ in 2019 and fully implemented by 2023, this study plans to analyze corporate profitability data from 2013 to 2023. It will also compare how this reform has affected companies listed on the ChiNext, STAR Market, and NEEQ as a group to its impact on NEEQ-listed companies alone. To do this, I'll set up two regressions using a Difference-in-Differences (DID) model.

For the first analysis, looking at the impact on companies listed on the ChiNext, STAR Market, and NEEQ, the setup for Equation (1) is as follows:

·i=1,2,…refers to individual companies,

·j=1,2,…represents the industries those companies belong to,

·t=1,2,…refers to different time periods for company listings.

The key variables are:

·**Treat,** a dummy variable that identifies whether a company is part of the ChiNext, STAR Market, or NEEQ. If the company is listed on any of these, Treat equals 1; otherwise, it's 0.

·**Post,** another dummy variable that marks whether the observation is from before or after the reform. If it's post-reform, Post equals 1; otherwise, it's 0.

The model also includes $X_{i,j,t}$ which represents control variables, and αj which accounts for industry fixed effects. The error term is $\epsilon_{i,j,t}$, while β_1, β_2, β_3, γ are the regression coefficients. Out of these, the most important one for this study is β_3. If $\beta_3>0$, it would suggest that the registration-based reform has increased the profitability of companies listed on the ChiNext, STAR Market, and NEEQ.

For the second analysis that focuses specifically on NEEQ-listed companies, Equation (1) has the same setup:

·i=1,2,… again represents individual companies,

·j=1,2,… represents the industries they belong to,

·t=1,2,… represents different time periods for company listings.

Here, the Treat variable is slightly different. It indicates whether a company is listed on the NEEQ. If the company is part of the NEEQ, Treat equals 1; otherwise, it's 0. The Post variable works the same way as before—it's 1 for observations after the reform and 0 for those before. Just like the first analysis, Xi,j,t represents control variables, αj accounts for industry fixed effects, ϵi,j,t is the error term, and β3 remains the primary focus. If β3>0, it would suggest that the registration-based reform has positively impacted the profitability of NEEQ-listed companies. In this study, I'll use two indicators to measure corporate profitability: net profit (B002000000) and profit growth rate (F081203B). Take the logarithm of the profit growth rate as lnjlr. These will serve as the dependent variables in the model, denoted as ΔPerformancei,j,t. The independent variable of the model is a dummy variable, indicating whether the company is observed before or after the reform. This is calculated as: Registrationi, t=Treati × Post. If company iii is observed after the reform, Registration equals 1. Otherwise, it equals 0.

The control variables of the model are as follows: total salary of the top three directors (Top3DirectorSumSalary1), number of employees (Y0601b), total liabilities (A002000000), employee compensation payable (A002112000), total audit fees (Tcost) and return on assets (F050201B) (see Table 1).

Table 1. Definition of Key Variables

Variable classification	Variable name	Symbol	Variable definition
Dependent variable	profit growth rate	lnjlr	Operating Revenue - Operating Costs - Taxes - Interest Expenses - Various Fees. Take logarithm of the profit growth rate
	Operating profit growth rate	F081203B	((Current Period Operating Profit - Previous Period Operating Profit)/Previous Period Operating Profit) * 100%

Independent variable	Registration system	Registration	Before the implementation of the registration reform, it is 0; after the implementation, it is 1.
Control variables	total salary of the top three directors	Top3DirectorSumSalary1	The total remuneration of the top three members of the board of directors among the year-end active employees.
	number of employees	Y0601b	The total number of employees in each company.
	total liabilities	A002000000	The total liabilities of each company.
	employee compensation payable	A002112000	The total compensation payable to employees by each company.
	total audit fees	Tcost	The total audit fees of each company.
	return on assets	F050201B	(Net Profit/Average Total Assets)*100%

4.2 Data Sources and Descriptive Statistics

Since the registration-based reform was partially implemented in the NEEQ on October 25, 2019, to ensure the balance of the sample, this study selects the sample period from January 1, 2013, to December 31, 2023. The sample companies consist of cross-sectional data of all IPO companies listed on the ChiNext, STAR Market, and NEEQ during the sample period. The data used in this study are sourced from the CSMAR database. All data processing operations are conducted using STATA 16.0.

To ensure data completeness and variable accuracy, this study applied interpolation and logarithmic transformation to key variables. First, for variables with missing values (such as profit growth rate B002000000B002000000 and other financial indicators), a grouped linear interpolation method was employed. Based on grouping by company ID and year, interpolation and extrapolation were performed to fill in missing data, generating corresponding interpolated variables (e.g., B002000000_e). This approach effectively addressed data gaps and avoided the problem of insufficient sample size caused by missing values.

Second, to reduce scale differences between data and improve the explanatory power of regression models, logarithmic transformation was applied to the interpolated variables. Specifically, variables such as total executive compensation (Top3DirectorSumSalary1_ e), number of employees (Y0601b_e) and total liabilities (A002000000_e) were transformed into their logarithmic forms (e.g., logTop3DirectorSumSalary1_e). Furthermore, any remaining missing values in the logarithmic variables were uniformly replaced with zeros to ensure data balance and model stability.

Finally, to capture the characteristics of profit growth rate, the logarithmic variable lnjlr =log(B002000000_e)) was generated. These data processing steps lay a solid foundation for the subsequent empirical analysis and enhance the reliability and interpretability of the research findings.

4.3 Baseline Regression Result

This section uses the sample of registration IPO companies after multiple imputation processing to empirically examine the impact of the registration system reform (registration) on the profitability of NEEQ companies. Firstly, based on a controlled experiment, the study uses data to explore the impact of the registration system reform on the profitability of companies listed on the ChiNext, STAR Market, and NEEQ. The results of the empirical test are shown in this chart.

Table 2. The Impact of Registration-Based Reform on the Profitability of Enterprises Listed on the ChiNext Market, STAR Market, and NEEQ

	(1) lnjlr	(2) F081203~e	(3) lnjlr	(4) F081203~e
zcz	-2.3348*** (-11.45)	-4.5742* (-1.75)	-2.8226*** (-13.82)	-5.0262* (-1.91)
2013.year	0.0000 (.)	0.0000 (.)	0.0000 (.)	0.0000 (.)
2014.year	0.1575 (0.84)	-2.7636 (-1.15)	-0.1245 (-0.67)	-3.0415 (-1.26)
2015.year	-0.3109* (-1.66)	-2.5030 (-1.04)	-0.8536*** (-4.49)	-3.0632 (-1.25)
2016.year	0.8545*** (4.56)	-1.7478 (-0.73)	0.1029 (0.53)	-2.4844 (-1.00)
2017.year	1.0803*** (5.76)	0.1596 (0.07)	0.1954 (1.00)	-0.6904 (-0.28)
2018.year	-0.4140** (-2.21)	-5.0228** (-2.10)	-1.3833*** (-7.05)	-5.9329** (-2.35)
2019.year	0.0182 (0.10)	-6.2655** (-2.56)	-0.9088*** (-4.55)	-7.1322*** (-2.77)
2020.year	-0.7136*** (-3.72)	-3.1236 (-1.28)	-1.6991*** (-8.45)	-4.0210 (-1.55)
2021.year	-1.2679*** (-6.62)	-1.8611 (-0.76)	-2.3080*** (-11.42)	-2.8037 (-1.08)
2022.yea	-2.7698*** (-14.46)	-3.3311 (-1.36)	-3.8170** (-18.79)	-4.2809 (-1.64)
2023.year	-2.8783*** (-15.02)	-1.4692 (-0.60)	-3.9051*** (-19.23)	-2.4348 (-0.93)
logTop3D~e			0.2088*** (8.63)	-0.1721 (-0.55) vcb
logY0601~e			1.0115*** (12.20)	0.7044 (0.66)
logA0020~e			0.0123 (0.52)	0.0927 (0.30)
logA0021~e			0.2241*** (7.24)	0.2608 (0.66)
logTcost_e			-0.1080** (-2.79)	0.0514 (0.10)

_cons	16.2588*** (122.59)	2.1694 (1.28)	3.9856*** (5.78)	-7.1117 (-0.80)
N	34520	34551	34520	34551
r2_w	0.0414	0.0006	0.0559	0.0007

Note: The values in parentheses are industry-clustered standard errors of the estimated coefficients. *, **, and *** indicate that the estimated coefficients are significant at the 10%, 5%, and 1% confidence levels, respectively. The same applies to the table below.

In Columns (1) and (3), the dependent variable is the profit growth rate, while in Columns (2) and (4), the dependent variable is net profit. The coefficient results for "zcz" in Columns (1) and (2) exhibit a significant negative correlation. After adding control variables in Columns (3) and (4), the results remain robust, with the coefficient results for "zcz" still showing a significant negative correlation. This indicates that the registration reform reduces the profitability of enterprises listed on the ChiNext, STAR Market, and the New Third Board. Column (3) further suggests that, in addition to being significantly impacted by the registration reform, the profitability of these enterprises is also highly correlated with the total salary of the top three directors (Top3DirectorSumSalary1), the number of employees (Y0601b), total liabilities (A002000000), employee compensation payable (A002112000), total audit fees (Tcost), and return on assets (F050201B0) (see Table 2).

Table 3. The Impact of Registration-Based Reform on the Profitability of NEEQ Enterprises

	(1) lnjlr	(2) F081203~e	(3) lnjlr	(4) F081203~e
zcz	3.9068***(3.37)	0.8925 (0.10)	1.3203 (1.13)	1.7789 (0.19)
2013.year	0.0000 (.)	0.0000 (.)	0.0000 (.)	0.0000 (.)
2014.year	-0.0326 (-0.16)	-3.6258** (-2.23)	-0.2019 (-0.98)	-3.6838**(-2.25)
2015.year	-0.5924*** (-2.86)	-3.0251* (-1.86)	-0.9114*** -0.9114***	-3.1668* (-1.92)
2016.year	0.7104*** (3.43)	-2.3098 (-1.42)	0.2438 (1.15)	-2.4975 (-1.49)
2017.year	1.1179*** (5.39)	-0.1204 (-0.07)	0.5557*** (2.60)	-0.3316 (-0.20)
2018.year	-0.2657 (-1.28)	-5.9326*** (-3.64)	-0.8904*** (-4.13)	-6.1556*** (-3.62)
2019.year	-0.1724 (-0.83)	-3.1558* (-1.94)	-0.8194*** (-3.78)	-3.4230** (-2.00)
2020.year	-0.7797*** (-3.76)	-4.0967** (-2.51)	-1.4686*** (-6.73)	-4.3753** (-2.54)
2021.year	-1.3406*** (-6.47)	-3.2315** (-1.98)	-2.0723*** (-9.44)	-3.5203** (-2.03)
2022.year	-2.8240*** (-13.62)	-5.0138*** (-3.08)	-3.5531*** (-16.11)	-5.3193*** (-3.06)

2023.year	-2.8528*** (-13.76)	-3.1661* (-1.94)	-3.5593*** (-16.14)	-3.5014** (-2.01)
logTop3D~e			0.1749*** (6.81)	-0.2424 (-1.19)
logY0601~e			0.9512*** (10.20)	-0.3310(-0.45)
logA0020~e			-0.0381 (-1.27)	0.0118 (0.05)
logA0021~e			0.1892*** (5.04)	0.3646(1.24)
logTcost_e			-0.0816* (-1.87)	-0.0229 (-0.07)
_cons	16.3646***(111.69)	2.7805** (2.41)	5.9050*** (7.14)	2.4940 (0.38)
N	28063	28094	28063	28094
r2_w	0.0288	0.0009	0.0389	0.0011

In Columns (1) and (3), the dependent variable is the profit growth rate, while in Columns (2) and (4), the dependent variable is net profit. Although the regression result (zcz) in Column (1) shows a significant positive correlation, the results(zcz) in Columns (2), (3), and (4) are not significant. Moreover, Columns (3) and (4) present regression results after inserting control variables. Therefore, it can be concluded that the registration reform has no impact on the profitability of enterprises listed on the New Third Board (see Table 3).

This result contrasts with the earlier findings on the impact of the registration reform on the profitability of ChiNext, STAR Market, and New Third Board enterprises. Specifically, the reform reduces the profitability of ChiNext and STAR Market enterprises but has no impact on the profitability of New Third Board enterprises. Therefore, this conclusion is consistent with H1.

5 Empirical Testing

5.1 Parallel Trend Test

To verify whether the registration-based reform reduces the profitability of enterprises on the ChiNext, STAR Market. Across all firms, this study employed a fixed effects model for regression analysis. Specifically, the papaer defined dummy variables for the relative years of policy implementation, including two years before the policy (before2 to before1), the year of implementation (current), and the four years following the policy (after1 to after4). By incorporating these time-period dummy variables into the regression model and controlling for firm characteristics (such as executive compensation, employee numbers, debt levels, payable employee compensation, and audit fees) as well as annual fixed effects, we conducted a dynamic assessment of the policy's impact.

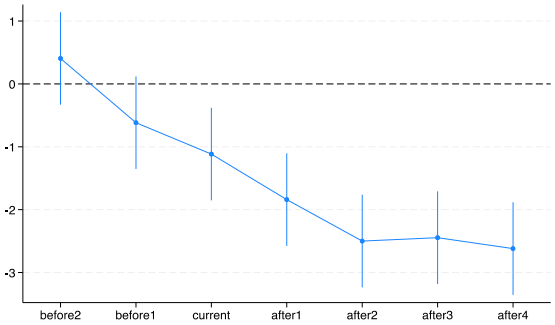

Fig. 1. Results of the Parallel Trend Test

The regression results show that the coefficients of the pre-policy dummy variables (e.g., before2 and before1) are not significant, indicating no significant differences between the treatment and control groups before the policy implementation, which aligns with the parallel trend assumption. Meanwhile, the post-policy dummy variables (e.g., after1 to after4) exhibit a significant negative correlation, suggesting that the registration-based reform reduces firms' profitability. This result is further validated through the graphical representation, which clearly demonstrates the trend of coefficients at each stage and their statistical significance (see Figure 1).

5.2 Placebo Test

To further address the potential influence of time trends and the confounding effects of other unobservable factors, this paper conducts a placebo test. Specifically, a random number seed is used to generate a dummy variable indicating whether a company is categorized as before or after the registration-based reform. This dummy variable replaces the "Registration" variable in Equation (1) for re-estimation. The regression process is repeated 500 times, resulting in the probability distribution of 500 regression coefficients shown in the figure below. The figure depicts the probability distribution of 500 regression coefficients for the profit growth rate variable. The probability distribution results for 500 regression coefficients of the operating profit growth rate variable are available upon request.

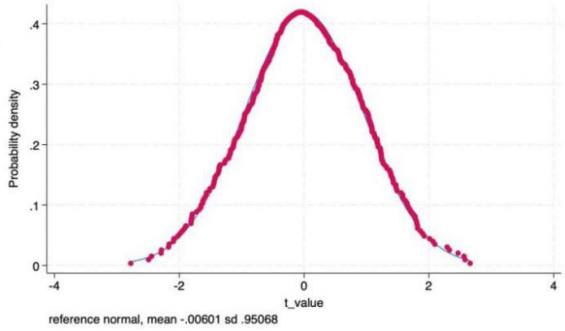

Fig. 2. Regression Coefficient

As shown in the Figure 2, the randomly sampled regression coefficients are approximately centered around zero and exhibit a normal distribution. This indicates that the observed effects of the reform on the profitability of ChiNext, STAR Market, and NEEQ enterprises are not driven by potential time trends or the confounding effects of other unobservable factors.

6 Inhibition Test

The research is to further explore whether the nature and scale of enterprises can influence the impact of the registration reform on corporate profitability. In China's capital market, there are significant differences between state-owned enterprises and non-state-owned enterprises. This study, conducted by Yadav, Pahi, and Gangakhedkar (2021), provides empirical evidence that firm size can influence a company's profitability, highlighting the complexities of managing larger organizations [10]. Therefore, divide enterprises into two categories: state-owned enterprises (SOEs) and non-state-owned enterprises (non-SOEs), and then investigate whether there are any changes in the profit growth rate (lnjlr) and profit growth rate (F081203B). The heterogeneity test of whether it is a state-owned enterprise is shown in the figure below.

Table 4. Results of the Suppression Analysis Based on Firm Characteristics

	(1) F081203~e	(2) F081203~e	(3) lnjlr	(4) lnjlr
zcz	-49.9019*** (-3.10)	-7.8380* (-1.89)	-3.9399** (-2.55)	-1.6998*** (-6.79)
logTop3D~e	-0.2070 (-0.37)	-0.6902 (-0.75)	0.1320** (2.46)	0.3527*** (6.38)
logY0601~e	-2.0404 (-0.38)	0.8849 (0.34)	-0.9357* (-1.82)	2.2149*** (14.14)
logA0020~e	3.6155 (0.96)	3.2433 (1.61)	0.4074 (1.13)	-0.2892** (-2.38)
logA0021~e	1.9309 (1.14)	-0.2871 (-0.26)	-0.0290 (-0.18)	0.2296*** (3.47)
logTcost_e	-24.3340*** (-4.45)	3.1346 (0.80)	0.8594 (1.64)	-2.0783*** (-8.84)
2013.year	0.0000 (.)	0.0000 (.)	0.0000 (.)	0.0000 (.)
2014.year	-8.4811 (-1.35)	-1.1998 (-0.27)	0.1931 (0.32)	0.0261 (0.10)
2015.year	11.5953* (1.83)	-1.3688 (-0.31)	-0.2293 (-0.38)	-0.4971* (-1.85)
2016.year	1.1914 (0.18)	-1.4101 (-0.31)	1.0588* (1.71)	0.1324 (0.49)
2017.year	3.2442 (0.49)	-1.5606 (-0.33)	1.2594** (2.00)	0.2606 (0.92)
2018.year	4.0011(0.60)	-8.5943* (-1.76)	1.0431 (1.63)	-1.9638*** (-6.66)

2019.year	5.0915 (0.76)	-10.3212** (-2.01)	1.5747** (2.45)	-1.5158*** (-4.91)
2020.year	-1.1779 (-0.17)	-3.1850 (-0.60)	1.5459** (2.37)	-2.2099*** (-6.95)
2021.year	3.6205 (0.52)	-3.7042 (-0.68)	0.1986 (0.30)	-2.7903*** (-8.53)
2022.year	4.9835 (0.71)	-5.4532 (-0.98)	-0.3272 (-0.48)	-4.1908*** - (-12.46)
2023.year	1.5787 (0.19)	-5.2950 (-0.76)	-0.4091 (-0.53)	-1.8581*** (-4.40)
_cons	251.1420*** (3.27)	-99.4357*(-1.95)	1.5316 (0.21)	26.2224*** (8.52)
N	3018	18075	3018	18075
r2_w	0.0176	0.0013	0.0194	0.0803

As shown in Table 4, (1) and (3) represent data from state-owned enterprises, while (2) and (4) represent data from other types of enterprises. It can be observed that compared to other enterprises, the registration reform can reduce profits more significantly for state-owned enterprises.

Table 5. Results of the Suppression Analysis Based on Firm Size

	(1) F081203~e	(2) F081203~e	(3) F081203~e	(4) lnjlr	(5) lnjlr	(6) lnjlr
zcz	-12.2919* (-1.84)	-6.2105 (-1.21)	1.2387 (0.21)	-2.1799*** (-6.18)	-3.2806*** (-6.84)	-2.6162*** (-3.19)
logTop3D~e	0.0417 (0.04)	-0.5157 (-0.81)	-0.5883** (-1.98)	0.1805*** (3.11)	0.1961*** (3.31)	0.1451*** (3.57)
logY0601~e	0.2922 (0.07)	-0.0031 (-0.00)	-2.6378 (-1.37)	1.4740*** (7.15)	1.6828*** (6.09)	1.9931*** (7.59)
logA0020~e	5.7022* (1.83)	-3.0034 (-1.19)	-2.5246 (-1.49)	1.4544*** (-8.85)	1.8349*** (-7.77)	1.6771*** (-7.22)
logA0021~e	-0.2731 (-0.18)	-0.7140 (-0.50)	2.0734** (2.37)	0.0156 (0.19)	0.6846*** (5.15)	0.6389*** (5.33)
logTcost_e	0.9242 (0.29)	-0.0535 (-0.01)	-1.8458 (-1.37)	-0.6355*** (-3.81)	-3.1218*** (-8.27)	-0.4209** (-2.29)
2013.year	0.0000 (.)	0.0000 (.)	0.0000 (.)	0.0000 (.)	0.0000 (.)	0.0000 (.)
2014.year	-0.2665 (-0.04)	-9.6763** (-2.32)	-4.9692* (-1.73)	0.0527 (0.16)	-0.3879 (-1.00)	-0.0653 (-0.17)
2015.year	-0.2854 (-0.04)	-9.9481** (-2.39)	-0.0788 (-0.03)	-0.3865 (-1.15)	-1.0512*** (-2.71)	-1.3141*** (-3.39)
2016.year	0.6154 (0.09)	-7.4467* (-1.74)	-1.6100 (-0.58)	0.3610 (1.04)	-0.1783 (-0.45)	0.2483 (0.65)

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2017.year	0.2162 (0.03)	-6.0360 (-1.38)	4.0135 (1.45)	0.1106 (0.30)	0.1492 (0.37)	0.9597** (2.54)
2018.year	-2.8288 (-0.39)	- 12.9403*** (-2.90)	-2.6481 (-0.95)	-1.3771*** (-3.62)	-1.5699*** (-3.77)	-0.3457 (-0.91)
2019.year	-13.2464* (-1.74)	-6.4850 (-1.42)	-1.5921 (-0.57)	-0.2988 (-0.74)	-1.3383*** (-3.14)	-0.0876 (-0.23)
2020.year	0.0343 (0.00)	-7.3209 (-1.56)	-2.8153 (-0.99)	-0.9439** (-2.27)	-1.8108*** (-4.13)	-1.1336* ** (-2.91)
2021.year	1.4959 (0.19)	-6.0843 (-1.27)	-1.6631 (-0.57)	-1.5292*** (-3.59)	-2.2308*** (-4.98)	-1.8000* ** (-4.52)
2022.year	-2.7365 (-0.33)	-7.5842 (-1.53)	-2.3137 (-0.78)	-4.1543*** (-9.50)	-3.6444*** (-7.88)	- 2.5960*** (-6.42)
2023.year	-0.0014 (-0.00)	-5.6194 (-1.12)	-1.8847 (-0.63)	-3.9269*** (-8.87)	-3.8342*** (-8.18)	-2.4601* ** (-6.03)
_cons	-1.2e+02* (-1.89)	91.7636 (1.38)	78.1481** (2.17)	39.2695*** (11.52)	71.3354*** (11.48)	33.2942* ** (6.76)
N	10976	10976	10976	10976	10976	10976
r2_w	0.0018	0.0020	0.0039	0.0824	0.0792	0.0482

As illustrated in Table 5, all companies have been into three size categories: small, medium, and large. Columns 1 to 3 represent sizes from small to large, and columns 4 and 5 also follow the order from small to large. Therefore, the larger the company size, the smaller the impact of the registration reform. Conversely, the smaller the company size, the greater the impact of the registration-based reform.

Overall, the size and nature of a company will influence the impact of this reform on its profitability.

7 Conclusion

This research takes all IPO companies listed on the ChiNext Market, STAR Market, and the NEEQ from 2013 to 2023 as samples to study the impact of the registration system reform on corporate profitability. Through empirical testing, the paper found that after controlling for other influencing factors, the registration-based reform can affect the profitability of companies on the GEM and STAR Market but has no significant impact on the profitability of companies on the New Third Board. Although this study makes certain contributions, it also has some limitations. The research primarily focuses on short-term to medium-term effects, leaving the long-term impacts unexplored. Future research could expand the sample to include non-IPO companies and

conduct longitudinal analyses to capture the long-term effects of the reform. Additionally, exploring other potential mechanisms, such as changes in market competition or investor behavior, could provide a deeper understanding of how the registration-based reform influences corporate performance.

By classifying companies based on ownership structure and size, state-owned enterprises are more easily influenced by the registration reform, while smaller companies are more easily be influenced by the registration reform. Based on these conclusions, this paper proposes two policy recommendations: (1) Provide targeted support for small and state-owned enterprises: Tailored policies, such as capacity-building programs and financial incentives, should be introduced to help these companies better adapt to the registration-based reform. (2) Continuous monitoring and feedback: Regular evaluations of the reform's impact on different market segments are necessary. This will help policymakers optimize the implementation process and proactively address emerging challenges.

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