IPO Reform and Venture Capital: Evidence from China

Celine (Yue) Fei[1]
Ulrich Hege[2]
Xiao Jia[3]

March 2026

[1]Department of Economics, University of Mannheim ; Email : yue.fei@uni-mannheim.de
[2]Toulouse School of Economics; Email: ulrich.hege@tse-fr.eu
[3]School of Economics, Huazhong University of Science and Technology; Email: jiaxiao@hust.edu.cn

IPO Reform and Venture Capital: Evidence from China[*]

Celine (Yue) Fei[†]   Ulrich Hege[‡]   Xiao Jia[§]

Abstract

We study how IPO reforms transmit to venture capital (VC) markets using the introduction of China's entrepreneurial boards, ChiNext and the registration-based STAR. We document that both boards attract younger, higher-growth firms with weaker fundamentals in levels, but post-IPO growth persists for ChiNext firms while decelerating sharply for STAR firms. VC backing plays different roles across regimes: on ChiNext it aligns with valuation premia and long-run outperformance, whereas on STAR it mainly predicts higher first-day returns. To identify causal effects on VC allocation, we construct novel text-based regulatory exposure measures from listing documents using keyword matching and Sentence-BERT semantic similarity, and show that VC financing reallocates toward firms more aligned with "supported" activities.

Key Words: IPO Reforms; IPO Listing Requirements; Venture Capital; Business Description; BERT; China
JEL Classification: G24, G28

[†]Department of Economics, University of Mannheim; Email: yue.fei@uni-mannheim.de; Address: L7, 3–5, Mannheim, Germany, 68161.

[‡]Toulouse School of Economics; Email: ulrich.hege@tse-fr.eu; Address: 1, Esplanade de l'Universite, Toulouse, France, 31080.

[§]School of Economics, Huazhong University of Science and Technology; Email: jiaxiao@hust.edu.cn; Address: Luoyu Road 1037, Wuhan, China, 430074.

1 Introduction

A fundamental question in financial economics is how shocks and incentives are transmitted across financial markets (Shleifer and Vishny, 1997, Duffie, 2010). Entrepreneurial finance offers a great setting for studying this question because it sits at the intersection of venture capital and public equity markets, and the two are linked through initial public offerings (IPO). IPO are a central exit route for VC-backed firms (Black and Gilson, 1998) and a key benchmark for VC performance (Gompers, 1996); early IPO success predicts subsequent IPOs (Nanda, Samila, and Sorenson (2020)); and IPO activity interacts with the depth of private capital markets (Doidge, Karolyi, and Stulz (2017) and Ewens and Farre-Mensa (2020)). These connections suggest that changes in public-market access should have first-order implications for VC investment allocation.

However, a growing literature emphasizes that IPO exits and post-IPO outcomes are shaped by informational and institutional frictions. Public-market institutions can facilitate VC exits in secondary markets (Huang, Mao, Wang, and Zhou (2021)), and post-IPO VC participation can mitigate information problems and support value-increasing investment (Iliev and Lowry (2020)). Intermediaries also matter—VC–underwriter ties affect IPO exits (Tuft and Yimfor (2025))—and the effectiveness of entrepreneurial exchanges depends on broader institutional quality such as shareholder protection (Bernstein, Dev, and Lerner (2020)). These frictions are particularly salient in emerging markets, where policy uncertainty and regulatory intervention can distort IPO pricing and the timing of listing opportunities (Cong and Howell (2021) and Qian, Ritter, and Shao (2024)).

Against this backdrop, we ask a central question: when public-market access expands through IPO reform, how does VC financing respond? We address this question using the introduction of China's two major entrepreneurial boards, ChiNext and STAR, and develop novel text-based measures of regulatory exposure to capture how the boards' written priorities map into firm-level treatment intensity. Specifically, we ask whether ChiNext and STAR select different types of firms into public markets and whether these differences persist after listing; whether VC backing plays different roles across the two regimes—consistent with certification and monitoring versus short-term demand amplification; and whether the launches causally reallocate VC capital toward firms more aligned with regulatory priorities and the impact of the timing and staging of VC investment along the firm life cycle.

We start by showing the difference in firm characteristics both at the time of the IPO and after

the IPO. Our analysis shows that ChiNext-listed companies are about 1.3 to 1.4 years younger and enter the market with weaker pre-IPO financial conditions in terms of levels, but stronger in terms of growth rate. On the one hand, ChiNext-listed firms have lower pre-IPO net profits by 278–343 million RMB, revenues by 2.83–3.47 billion RMB, and net assets by 1.74–2.07 billion RMB. On the other hand, they exhibit a higher net profit growth of 25-30% and revenue growth of 2-13%. The differences align closely with ChiNext's relaxed listing standards. Regarding STAR issuers, we find an even stronger difference: they are about 2.5 to 2.6 years younger at the IPO and show higher net profit growth by 73 to 84% and revenue growth by 112 to 113%, together with even weaker pre-IPO financial fundamentals in levels. This finding implies that when financial thresholds in the listing requirements are loosened further under the registration-based regime of STAR, listed firms shift even more toward earlier-stage, high-growth ones. In general, our findings indicate that the rules allow firms with limited scale and profitability to list earlier as long as they show strong growth patterns, which is consistent with the high growth mechanism of entrepreneurial boards discussed in Bernstein, Dev, and Lerner (2020).

In terms of post-IPO performance, we find an opposite pattern when comparing ChiNext and STAR-listed firms. Specifically, ChiNext firms continue to have lower post-IPO profit and revenue levels, yet maintain higher growth several years after going public, consistent with persistent firm-type differences rather than temporary deviations around listing. In contrast, the post-IPO growth advantage of STAR firms is much smaller. For example, revenue growth is only about 9–10 percentage points higher for STAR-listed firms compared to others after the IPO, pointing to a pronounced post-IPO deceleration relative to the exceptionally high growth observed at the IPO. The findings suggest that the extreme high growth for STAR firms appears to be front-loaded around the IPO. All results in both the pre- and post-IPO analysis remain robust in excluding reverse mergers and "special treatment" firms as discussed in Qian, Ritter, and Shao (2024) and in including fixed effects of the year of the IPO and province.

In addition, we find that VC backing plays very different roles between the two entrepreneurial boards. In ChiNext, VC-backed companies receive higher IPO valuations (P/E about 3 to 5 points higher), perform well long-term (three-year returns about 29 to 49% higher) and there are no significant differences in underpricing. In contrast, on STAR, VC backing is associated with higher first-day returns (approximately 18-22% higher) but without a valuation premium and no long-term performance. This indicates that VCs play a role of certification and monitoring on ChiNext (Iliev

and Lowry (2020) and Megginson and Weiss (1991)). However, VCs are mainly seeking short-term performance under the STAR registration-based regime, potentially due to grandstanding motivation (Gompers (1996) and Nanda, Samila, and Sorenson (2020)), consistent with our findings in the post-IPO analysis of financial fundamentals.

Next, we study the causal effect of the launch of entrepreneurial public market boards on the venture capital market. China's entrepreneurial boards provide a particularly useful laboratory to study this question because their launches were affected by long political and administrative delays. These delays suggest that VC investors were unlikely to have determined the timing through lobbying—otherwise both boards would have been introduced much earlier, which reduces concerns about reverse causality. In addition, while macroeconomic conditions or a rising total number of startups may affect aggregate VC activity, it is less plausible that such unobserved factors jointly drive both board launches and our outcomes, especially within short event windows (i.e., three years). It would have been difficult for startups or investors to anticipate the passage of ChiNext/STAR far in advance and adjust behavior more than four years ago when making investments.

A remaining concern is that our results may not be driven by the lower listing requirements of the entrepreneurial boards, but by other contemporaneous policies that promote entrepreneurship and VC financing. To address this, we exploit the text explicitly written in the ChiNext Listing Guidelines and STAR Listing Opinions to measure regulatory heterogeneity across business activities. Specifically, we identify the categories of "supported" and "opposed" business activity stated in the IPO guidelines. For example, STAR supports companies doing the business of Next-generation Information Technology, High-end Equipment, New Materials, New Energy, Big Data, and so on. Our identification then relies on the assumption that the intensity of other policies does not perfectly align with this regulation-implied, text-based treatment intensity.

In particular, we develop a novel measure of treatment intensity by mapping the supported and opposed activity categories in the IPO guidelines to each startup's registered business description. We construct firm-level exposure from textual similarity between a startup's business description and benchmark category descriptions using two complementary approaches: a keyword-based share that measures direct overlap with regulatory dictionaries, and a measure of semantic similarity based on Sentence-BERT (SBERT) embeddings and cosine similarity. Using firm registry descriptions (NECIPS), official regulatory texts (CSRC), and standardized fine-grained activity definitions (BSSES), the SBERT approach captures a firm's alignment with regulated activities in a meaningful

3

contextual way. While keyword counts provide a transparent, coarse proxy, SBERT captures deeper semantic proximity, which we view as reflecting a more sophisticated assessment of regulatory fit.

We begin by validating our text-based treatment-intensity measures, analogous to a first-stage test in an instrumental-variables analysis. We find that firms whose registered business descriptions are textually closer to "supported" activities are significantly more likely to list on ChiNext and STAR, while proximity to "opposed" activities reduces the likelihood of listing on ChiNext. The predictive power is substantially stronger when the alignment is measured semantically with SBERT. For example, for ChiNext, a one–percentage-point increase in keyword overlap predicts a 2.28% higher listing probability, versus 7.30% using SBERT.

Moreover, our results of difference-in-differences show that after the launch of each board, companies more aligned with "supported" activities receive more VC financing, while companies aligned with "opposed" activities receive less. We document both across-firm effects (controlling for time-, province-, and industry fixed effects) and within-firm effects (controlling for time- and firm fixed effects). The effects are consistently larger when the intensity of the treatment is measured using SBERT rather than keyword counts. For example, following the STAR launch, in our preferred specification with the full set of fixed effects, a 10% increase in the keyword measure implies a 9.42% increase in VC financing, whereas a 10% increase in SBERT measure implies a 62.42% increase. In the within-firm specification, the corresponding increases are 12.19% and 80.58%. These patterns suggest that VCs respond to entrepreneurial boards in a way that reflects a more nuanced semantic understanding of the underlying business activities of firms as well as the direction of regulation.

In addition, we also implement a generalized difference-in-difference analysis by interacting treatment intensity with semester–year indicators, which yields a dynamic event-study of VC financing effects around the launches of ChiNext and STAR. This design both tests for parallel pre-trends and pinpoints when effects begin to materialize. For both boards, pre-launch differences in the treated and control groups are close to zero and statistically insignificant, supporting the parallel pre-trend assumption. After launch, VC financing increases for firms in categories "supported" dramatically, but the timing differs. For ChiNext, the increase becomes clear after the first semester of 2010, aligning with the formal publication of the ChiNext Listing Guidelines. Regarding STAR, the increase starts in the second semester of 2018, coinciding with President Xi's speech announcing the idea of STAR, consistent with the policy effects emerging through high-level communication before formal documents are issued.

4

Finally, we also study whether the launch of entrepreneurial boards reshapes when VCs invest during the firm life cycle. In firm age tests, while we find a consistent decrease in the average firm age after the availability of the entrepreneurial boards, the within-firm evidence diverges across boards. Firms attract more VC financing at younger ages after STAR but shift toward more mature ages after ChiNext. We further distinguish whether VCs shift the entire investment window earlier or simply adjust the intensity of staged financing by examining the sequence of financing rounds. The evidence also suggests different mechanisms for the two boards. After ChiNext, VCs move the investment window earlier on average, but within firms, allocate relatively more financing to later rounds. After STAR, we find a shift toward later rounds both on average and within firms. Taken together, these patterns imply that the more permissive STAR IPO regime is associated with VC allocation towards younger firms, while both reforms are accompanied by greater reliance on staging within firms. This difference in the age of the startup and the timing of the funding rounds between ChiNext and STAR is consistent with our findings on the fundamentals of the firm and the valuation at the time of the IPO.

Noticeably, the STAR results are particularly striking against the backdrop of China's post-2015 economic slowdown[1], which coincided with a broad decline in VC activity, as presented in Figure 1. Despite this aggregate downward trend, our difference-in-differences analysis shows a large and robust relative increase in VC financing for firms whose business descriptions are more closely aligned with STAR's "supported" activities. This contrast strengthens the interpretation that we are identifying a regulation-driven reallocation in VC funding associated with STAR's launch—rather than merely reflecting an economy-wide or financial-cycle shock—and highlights how the listing documents helped shape the direction and structure of VC investment. Nevertheless, our analysis does not claim to show that ChiNext and STAR were the *only* drivers of VC funding but entrepreneurial boards with lower listing requirements can promote VC funding.

Our paper contributes to three streams of literature. First, we add to the work on how policy shapes startup financing. While prior studies examine tax incentives (Edwards and Todtenhaupt (2020)), legal reforms that affect VC behavior and networks (Eldar and Grennan (2024)), and accelerators that relax firm capacity constraints (González-Uribe and Reyes (2021)), we focus on a distinct and high-stakes policy lever: IPO reform. Using the introduction of China's two main

---

[1]The big increase in 2014 and 2015 is most likely due to the mass entrepreneurship and innovation" movement, first introduced by Premier Li Keqiang during the Summer Davos Forum in September 2014, followed by the State Council issuing the Opinions on Vigorously Promoting Mass Entrepreneurship and Innovation" in June 2015.

entrepreneurial boards, we show how expanding public-market access changes the extent to which firms can go public and how venture capital responds.

Second, we contribute to the literature on the importance of public markets for venture capitalist. Previous work highlights IPO as a key VC exit and performance benchmark (Gompers (1996) and Nanda, Samila, and Sorenson (2020)) and links IPO activity to private-market conditions (Doidge, Karolyi, and Stulz (2017) and Ewens and Farre-Mensa (2020)). It also shows that the success of entrepreneurial public markets depends on institutions (Bernstein, Dev, and Lerner (2020)). VCs incorporate information from the public market in their exit, staging, and syndication decisions (Gompers, Gornall, Kaplan, and Strebulaev (2020) and Liu and Tian (2022)); conversely, venture investors can earn returns in public markets by trading innovations developed by private firms (Chattopadhyay, McConnell, Trombley, and Yavuz (2025)). We add to the ltierature in two ways: we provide direct causal evidence on how IPO-market reforms transmit to VC allocation, and we show that two seemingly similar, access-expanding reforms—ChiNext and the registration-based STAR—produce distinct post-IPO dynamics and distinct roles for VC backing.

Third, we offer a methodological contribution by extending the difference-in-differences (DID) framework with a continuous text-based treatment intensity constructed from the business descriptions of startups and the explicit language of the regulatory documents. Previous work uses business descriptions to measure competitive positioning and similarity of firms (Hoberg and Phillips (2016)), map startups to public incumbents (Pham, Rezaei, and Zein (2025)), proxy for how learnable startups are from historical precedents (Bonelli (2025)), and characterize technological environments from patent text to explain exit choices (Bowen, Frésard, and Hoberg (2023)). We add to the literature by building firm-level regulatory exposure using keyword overlap and Sentence-BERT semantic similarity. Our approach advances the DID-based policy evaluation beyond industry or location splits (e.g., Ewens and Farre-Mensa (2020) and Hombert, Schoar, Sraer, and Thesmar (2020)), allowing regulatory intent to be measured on scale and with richer economic content.

2 Institutional Background

2.1 The Venture Capital Market in China

While venture capital activity in China started later than in Western economies, the sector has expanded rapidly over the past two decades and attracted increasing global attention. Following the burst of the Internet bubble in 2000, China's venture capital market grew quickly, and within less than twenty years reached a scale comparable to that of the United States in terms of both the number and volume of financing rounds.

Formal legal and regulatory institutions have played a central role in this development. During the early period from 1999 to 2004, venture capital investment concentrated heavily on internet firms such as Tencent, Alibaba, and Sina. However, prior to May 2005, only a small fraction of shares were permitted to trade on the Shanghai and Shenzhen stock exchanges, which substantially limited profitable VC exits through the domestic IPO market.[2] Beginning in 2005, a series of central-government policies were introduced to facilitate the development of the venture capital sector. In particular, the National Development and Reform Commission issued policy guidelines in 2005 to promote venture capital activity, and in 2013 the government formally clarified that the China Securities Regulatory Commission (CSRC) was responsible for the supervision and regulation of private capital markets.

While policies promoting capital inflows into the venture capital sector are important, the availability of profitable exit opportunities is arguably even more critical. In the next subsection, we discuss the development of entrepreneurial public equity markets in China and the institutional frictions encountered in this process.

2.2 Entrepreneurial Public Markets in China

China stands out among large economies for the depth and frequency of its experimentation with stock market design and IPO listing reforms (more in the Internet Appendix). As documented in Qian, Ritter, and Shao (2024), over nearly three decades, seven stock market boards have been introduced sequentially,[3] alongside eight major reforms to IPO pricing mechanisms.

---

[2]In addition, limited partnerships were not legally recognized until 2006, implying that early venture capital funds relied primarily on foreign contractual arrangements.

[3]In addition to the Main Board and the three boards discussed below, the Zhongguancun Science Park in Beijing served as a pilot OTC trading system around 2006, which was later expanded nationwide and formalized as the

We focus on ChiNext and STAR, which constitute the most consequential reforms for entrepreneurial start-ups. Launched in 2009, ChiNext was the first entrepreneurship-oriented listing board, characterized by relaxed listing requirements designed to facilitate public listings by young and innovative firms. As part of the broader IPO registration reform, STAR represents the first stock board operating under a registration-based IPO system, with an explicit focus on high-technology firms,[4] thereby substantially expanding exit opportunities for start-ups. As of December 2023, 1,333 firms were listed on ChiNext with a total market capitalization of 11.37 trillion RMB (approximately 1.59 trillion USD), while 581 firms were listed on STAR in 2024 with a combined market capitalization of 6.34 trillion RMB (approximately 0.89 trillion USD). By comparison, the Main Board and SME Board together host 1,511 firms with a total market capitalization of 19.63 trillion RMB (approximately 2.75 trillion USD).

[INSERT Table 1 AROUND HERE]

The launch of ChiNext followed a prolonged policy debate marked by substantial institutional frictions. As early as March 1998, proposals for a Chinese entrepreneurial stock market board were under discussion, beginning with an initiative by Siwei Cheng, a prominent economic reformer and government official. The original proposal envisioned a secondary board targeting high-technology firms, similar to Hong Kong's Growth Enterprise Market. However, this initiative was delayed by the dot-com bust in 2001. After several revisions, the Shenzhen SME Board was introduced on May 27, 2004 as an intermediate step without changing the listing requirements as to those of the Main Board. Further delays followed, partly due to the global financial crisis of 2008. After a small-scale pilot in September 2009, ChiNext was formally launched on October 23, 2009. Importantly, ChiNext introduced meaningfully relaxed listing requirements along five key financial dimensions—profits, revenues, assets, intangibles, and market capitalization—as summarized in Table 1.[5]

The STAR Market was similarly established following an extended period of policy deliberation and delay. The earliest proposal for a registration-based stock market board can be traced to the

---

National Equities Exchange and Quotations (NEEQ) in December 2013. More recently, the Beijing Stock Exchange (BSE) was launched in September 2021.

[4]China relied on an approval-based IPO system prior to the reform initiated in 2019; see the Internet Appendix and Qian, Ritter, and Shao (2024) for further details.

[5]For example, ChiNext requires positive net profits for two years prior to listing with cumulative profits exceeding 10 million RMB, compared with three years and 30 million RMB for the SME and Main Boards. Alternatively, firms may qualify with positive net profits for one year exceeding 5 million RMB and revenues above 50 million RMB.

18th National Communist Party Congress in 2012, although the Shanghai Stock Exchange did not publicly acknowledge work on the initiative until March 2015. On November 5, 2018, President Xi Jinping formally announced the establishment of the STAR Market as a new board of the Shanghai Stock Exchange and a pilot for a registration-based IPO system. STAR was subsequently launched on June 13, 2019 and relaxed the listing requirements compared to ChiNext in terms of net profit, operating revenue, R&D investment, net cash flow from operation as summarized in Table 1. Moreover, flexible rules can be applied for companies with core and innovative products and technical advantages.

The uncertainty surrounding both the timing of launch and the specific content of the listing rules renders ChiNext and STAR nice quasi-natural experiments. ChiNext took more than a decade to progress from initial proposal to formal launch, while STAR spent approximately seven years. Given that typical VC investment cycles in China last about four years, VCs could not credibly time early-stage investment decisions in anticipation of the exact launch dates of the entrepreneurial boards. Moreover, the final listing rules—such as the classification of supported and restricted business categories discussed below—were difficult for market participants to anticipate ex ante. As a result, the introduction of ChiNext and STAR constitutes plausibly exogenous shocks to VC investments.

2.3 Treated Business Activities

The IPO process on ChiNext is fully regulated by the China Securities Regulatory Commission (CSRC). In 2010, CRSC established specific guidelines on the types of business activities that define whether a company is encouraged to list on ChiNext or face restrictions when attemtping to do so. In particular, to identify the impact of ChiNext, we leverage the regulatory heterogeneity in business activities stated in the *Guidelines for the Further Details of Issuance Sponsorship for Companies Listing on ChiNext* (henceforth, ChiNext Listing Guidelines) put into effect in March 2010, shortly after the very first few of IPO trial listings on ChiNext in October 2009.

[INSERT Table 2 AROUND HERE]

The ChiNext Listing Guidelines spell out nine business activity categories that are especially supported ones, mainly related to high technologies and innovations. Moreover, there are seven

9

business activity categories listed as the cautiously opposed ones, mainly those with overcapacity and redundant construction. A detailed description of these categories can be found in Table 2.

Regarding the STAR market, in spite of the transition to a registration-based IPO system, the CSRC also published specific guidelines on the types of companies that are encouraged to list on STAR (the CSRC does not set up restricted business activities regarding listings on STAR), with the aim to support high and new technologies. In particular, we build text-based treatment intensity measures based on the *Implementation Opinions on Establishing the Science and Technology Innovation Board and Piloting the Registration-Based IPO System on the Shanghai Stock Exchange* (henceforth, STAR Listing Opinions) which was released on January 28th, 2019 at the beginning of the establishment of the STAR market.

The STAR Listing Opinions especially encourage the listing of ten business activity categories. Some categories overlap with the supported ones on ChiNext, such as New Materials, New Energy, and Energy Conservation and Environmental Protection. Some categories are unique to STAR and reflect recent technology development, such as Big Data, Cloud Computing, and Artificial intelligence. A detailed description of these categories can be found in Table 2.

To be discussed in the next section, we construct two measures to capture the textual closeness of the observation company's business activities to the supported/opposed categories.

3 Data and Measurement

3.1 Data and Summary Statistics

The data source for our analysis of public companies is Wind, a comprehensive financial database widely used in empirical research on Chinese capital markets and often regarded as the Chinese counterpart to Bloomberg. From Wind, we obtain detailed firm-level information covering both corporate characteristics and financial statements. Specifically, our dataset includes balance sheet variables spanning a window from three years prior to firms' initial public offerings (IPOs) to five years following their IPOs, which allows us to examine firm fundamentals around the listing event. In addition, we collect income statement data and stock return information, enabling a comprehensive analysis of firms' operating performance and market outcomes over time.

For the analysis of the venture capital market, we obtain information on venture capital funding

and start-up firms from the National Enterprise Credit Information Publicity System (NECIPS) in our study of ChiNext. NECIPS is the national administrative registry for all firms registered in mainland China, including all private firms. Crucially, NECIPS provides comprehensive and annually updated information on the identities of all shareholders, which allows us to construct the universe of VC-backed portfolio companies and their associated venture capital investments. Complete coverage of venture capital activity is particularly important in the early periods of market development, as small or unrepresentative samples may substantially reduce statistical power and bias. Based on these data, we construct our sample from the third quarter of 2005 to the fourth quarter of 2012, encompassing the period surrounding the introduction of ChiNext in 2009–2010.

For our analysis related to STAR, we rely on an alternative data source, Zero2IPO, primarily for cost considerations. Zero2IPO is a commercial database specializing in venture capital and private equity investment. For funding in recent years, Zero2IPO has substantially improved its data coverage and has begun to incorporate information from NECIPS, which helps mitigate potential data biases in the STAR-related analysis. Our sample consists of a company–quarter panel spanning from the first quarter of 2013 to the fourth quarter of 2022, covering the period surrounding the introduction of STAR in 2019. We end the sample in 2022 because the full scale reform of the IPO registration system in 2023 effectively extends the treatment to all firms, rendering our identification strategy invalid beyond this point.

To be included in the sample, portfolio companies are required to have received at least one venture capital funding round. In addition, we exclude all financial firms (i.e., real estate companies, investment firms, and related entities). In addition, when analyzing firm age, we impose a further restriction that company age must exceed the 1% percentile of firm age of the sample (i.e., age ≥ -0.25 for the ChiNext sample and age ≥ 0 for the STAR sample). Table A1 in the Appendix provides additional details on the data and variables used in the analyses.

[INSERT Table 3 AROUND HERE]

Table 3 reports summary statistics for the main variables used in the analysis. Panel A presents firm-level financial characteristics and IPO outcomes for listed companies. Median net profit and revenue are RMB 68,277 (USD 9.8 thousand) and RMB 920,582 (USD 0.13 million), respectively, with the interquartile ranges spanning from RMB 25,533 to RMB 200,491 for net profit and from RMB 356,180 to RMB 2.72 million for revenue (USD 3.6–28.6 thousand and USD 0.05–0.39 mil-

11

lion, respectively), indicating substantial dispersion in firm size. Net assets exhibit a similar pattern. Growth rates of net profit and revenue show wide variation, with interquartile ranges of approximately 72 and 31 percentage points, respectively, and include negative values. IPO outcomes are also heterogeneous: average underpricing is 101 percent, and mean post-IPO returns increase with the investment horizon, from 35 percent after one year to 112 percent after three years. These variations provide sufficient room for our empirical analysis.

Panels B and C report summary statistics for the ChiNext and STAR market samples. VC investment activity is sparse at the firm–time level, with firms receiving on average 0.04 financing rounds in the ChiNext sample and 0.10 rounds in the STAR sample, and median values equal to zero in both samples, implying that start-up firms do not receive any VC funding in most of the years. Based on keyword matching, 6 percent of ChiNext firms and 7 percent of STAR firms have business descriptions overlapping with activities explicitly supported by the IPO regulation, while 18 percent of ChiNext firms overlap with activities cautiously opposed by it. Cosine-similarity measures suggest broader regulatory exposure: the mean *Similarity Supported* equals 31 percent in ChiNext and 37 percent in STAR, and the mean *Similarity Opposed* in ChiNext equals 33 percent. Firm age and financing rounds vary substantially across observations, with higher average age and more financing rounds in the STAR sample.

[INSERT Figure 1 AROUND HERE]

Figure 1 illustrates the time trend of venture capital financing using data from Zero2IPO. The vertical axis represents the number of VC financing rounds, including total, early and late rounds, received by all companies within each year-quarter. The horizontal axis represents the year-quarters from 2000 to 2022. The graph shows a significant increase in the total number of VC investments after establishing ChiNext, despite the temporary drops potentially due to the stock market crashes in 2015. Interestingly, we observe a decrease in VC deals after the launch of STAR, which implies that our findings below are unlikely to be driven by overall funding expansion in the VC sector along the year.

3.2 Textual Measurement

In this subsection, we present how we construction our novel measure based on textual analysis of the business descriptions of start-up firms. In particular, we develop two measures for the textual similarity between the listing guideline describing "supported" (and "opposed" as well for ChiNext) business activities and firm's business description. The first one is the % of sub-business activities that are especially supported or cautiously opposed using keyword matching. The second one is the cosine similarity between text vectors of the company's registered business descriptions and the official descriptions of business activity categories.

For both measures, we use textual data from three sources: the registry business description of companies from NECIPS, the IPO regulatory document from CSRC, and standardized detailed business descriptions from the Business Scope Standardized Expression System (BSSES). Supported and opposed categories shown in Table 2 are explicitly stated in the IPO regulatory documents.

3.2.1 Keywords Matching

We first split each company's registry business description into sub-business activities using multiple delimiters. Then, we use the set of keywords for the supported or opposed business activities written in the IPO regulation (as shown in Table 2) as the dictionary.

Suppose company i's business description T_i includes n_i sub-business activities ($s_{ij}, j = 1, 2, ..., n_i$). We define an indicator $I(s_{ij})$ that equals 1 if s_{ij} contains at least one keyword from the dictionary of supported activities and 0 otherwise. The company-level variable *% Supported* based on keyword matching is $\% \ Supported_i = \frac{\sum_{j=1}^{n_i} I(s_{ij})}{n_i}$, where $\sum_{j=1}^{n_i} I(s_{ij})$ is the total number of sub-business activities containing keywords from the dictionary of supported activities, and n_i is the total number of sub-business activities of the company.

This calculation yields the *% Supported* variable representing the proportion of a company's registered business activities that overlap with regulatory supported activities. Similarly, using the dictionary of the opposed activities, we construct the variable *% Opposed* for the proportion of a company's registered business activities that overlap with regulatory opposed activities.

13

3.2.2 Cosine Similarity

We measure the semantic similarity between a company's registered business description and the IPO regulatory document using a three-step SBERT-based procedure. First, we expand the keyword dictionaries using the Business Scope Standardized Expression System (BSSES) to map each regulatory keyword into standardized, fine-grained business descriptions, which allows us to capture the full scope of activities associated with each keyword (e.g., "New Energy" includes 384 subcategories). Second, we embed business descriptions using the sentence-BERT (SBERT) model of Reimers and Gurevych (2019), which is designed to produce semantically meaningful sentence-level representations.[6] Third, we compute cosine similarity between the firm's business-description vector and the BSSES-based vectors. Within each "supported" (or "opposed") category, we take the median similarity to reduce the influence of "too general" fine-grained business descriptions in BSSES such as "technology transfer", and across categories we use the maximum similarity to capture the firm's closest alignment with any regulated activity.

We illustrate the algorithm with the following example. Take the nine categories of especially supported business activities for ChiNext, denoted by, $S_j, j \in [1, 9]$, for instance. Let T_i denote the business description of company i. First, we obtain a list of standardized, fine-grained business descriptions $S_{j1}, ..., S_{jn}$ for each supported category S_j (for instance, n equals to 384 in the "New Energy" category). Second, we embed $V(T_i)$ and all $V(S_{jk})$ using SBERT and calculate a cosine similarity value between $V(T_i)$ and each $V(S_{jk})$. Third, we calculate the variable *Similarity Supported* for company i using the following equation:

$$Similarity\ Supported_i = \max_{j \in [1,9]} \left\{ \text{Median}_{k \in [1,n]} \left\{ \cos\left(V(T_i), V(S_{jk})\right) \right\} \right\},$$

Where cos(.) represents cosine similarity calculation and V(.) represents the vector of text after SBERT transformation.

---

[6]The SBERT, or BERT model in general, does not depend on the language. We use a publicly available version pretrained on Chinese text: paraphrase-multilingual-MiniLM-L12-v2.

4   Company Characteristics at IPO

4.1   Company Characteristics at IPO

We begin our analysis by comparing firm characteristics at the time of IPO. As discussed in Section 2 and shown in Table 1, ChiNext and STAR impose lower listing requirements than the Main Board and the SME Board.[7] A natural first question is whether firms listing on ChiNext and STAR differ systematically from those listing on alternative boards. Accordingly, we test the "risk of expropriation" hypothesis that the new entrepreneurial boards facilitate public listings by younger, less profitable, but higher-growth firms (Bernstein, Dev, and Lerner, 2020).

[INSERT Table 4 AROUND HERE]

Table 4 reports the results for ChiNext. Columns (1) and (2) present estimates using the full sample period prior to the introduction of STAR (1990–2019). Columns (3)–(8) focus on the post-ChiNext period (2009–2019) and progressively refine the sample by excluding reverse mergers in columns (5) and (6) and firms that received prior "special treatment" warnings in columns (7) and (8). Odd-numbered columns include IPO-year fixed effects only, while even-numbered columns additionally control for province and IPO-year fixed effects.

Panel A shows that firms listing on ChiNext are approximately 1.33 to 1.42 years younger at the time of IPO than firms listing on the Main Board or SME Board (β ranging from -1.33 to -1.42; $p < 0.01$). Panels B–D examine key financial performance characteristics listed in the relaxed listing requirements of ChiNext, as summarized in Table 1. More specifically, Panel B shows that ChiNext-listed firms report lower cumulative net profits in the three years prior to IPO (β ranging from -278.13 to -343.17 million RMB; $p < 0.01$). Panel C shows that ChiNext-listed firms have lower revenues over the same period (β ranging from -2.83 to -3.47 billion RMB; $p < 0.01$). Panel D shows that ChiNext-listed firms also have smaller net assets prior to IPO (β ranging from -1.74 to -2.07 billion RMB; $p < 0.01$). Taken together, these results indicate that ChiNext-listed firms exhibit systematically weaker ex ante financial characteristics relative to firms listing on the Main Board and SME Board, consistent with the effective implementation of relaxed listing standards.

---

[7]We combine the Main Board and the SME Board in the comparison because they share identical listing requirements; moreover, the SME Board was merged into the Main Board on April 6, 2021.

Panels E and F examine growth rates in net profits and revenues, respectively (net asset growth is not analyzed, as it is not part of the listing requirements). We find that ChiNext-listed firms exhibit 25–30% higher net profit growth and 2–13% higher revenue growth. These coefficients are statistically significant at the 1% level across all specifications when restricting the sample to the post-ChiNext period (2009–2019). Overall, the evidence is consistent with ChiNext's listing requirements emphasizing high growth, namely that the growth rate of net profits is positive or that the growth rate of revenues exceeds 30%.

[INSERT Table 5 AROUND HERE]

Table 5 reports the results for STAR, where we compare companies listed on STAR with companies listed on ChiNext as well as those listed on the Main and SME Boards. Columns (1) and (2) present estimates for the full sample period from 1990 to 2023, while columns (3)–(8) restrict the sample to the post-STAR period (2019–2023) and progressively exclude reverse mergers in columns (5) and (6) and firms that previously received special-treatment warnings in columns (7) and (8). Panel A shows that firms listing on STAR are substantially younger at the time of IPO, with an age gap of approximately 2.54 to 2.63 years relative to the comparison sample. Coefficients are statistically significant at the level of 1% in all specifications.

Panels B–D examine pre-IPO financial characteristics directly stated in listing requirements. Wd find that STAR-listed firms exhibit significantly lower cumulative net profits, revenues, and net assets in the three years prior to IPO, with all coefficients statistically significant at the 1% level. Panels E and F show that STAR-listed firms also exhibit markedly higher growth rates prior to IPO, with net profit growth higher by approximately 73–84 percentage points and revenue growth higher by approximately 112–113 percentage points across specifications. Coefficients are statistically significant at the level of 1% in all specifications.

One interesting observation is that the economic magnitude of the difference in company characteristics before IPO for the STAR market we show in Table 5 is much larger than the findings shown in Table 4. The difference in company age is roughly twice as large as that observed for ChiNext, indicating that STAR attracts significantly younger firms. Moreover, relative to ChiNext, STAR-listed firms exhibit substantially weaker financial fundamentals at IPO, with cumulative net profits lower by roughly 30–40% and net assets lower by approximately 40–70% in magnitude. Similarly,

16

the growth differential is markedly larger: STAR firms display net profit growth that is about 2.5–3 times higher and revenue growth nearly an order of magnitude larger than that of ChiNext-listed firms, highlighting STAR's much stronger tilt toward high-growth firms.

In summary, we find that firm characteristics prior IPO closely mirror the relaxed listing standards of the entrepreneurial boards. Listing requirements lower the bar on the levels of net profits, revenues, and net assets while imposing higher thresholds on the growth rates of profits and revenues. Accordingly, firms listing on ChiNext and STAR exhibit weaker financial fundamentals but significantly stronger growth. Because listing standards are more permissive under STAR's registration-based regime, these shifts are more pronounced for STAR than for ChiNext. STAR-listed firms are even younger and of higher growth rate despite unchanged requirements on age and growth rate, consistent with lower financial thresholds enabling earlier public listings for firms with higher growth.

4.2 Company Performance after IPO

We next examine firm performance after IPO to assess whether the differences in firm characteristics at IPO documented in the previous subsection persist into the post-IPO period. In particular, we analyze post-IPO net profits, revenues, and growth rates for firms listed on ChiNext and STAR, comparing them to firms listed on alternative boards.

[INSERT Table 6 AROUND HERE]

Table 6 reports the post-IPO performance results for ChiNext. The column structure and sample refinements follow the same specifications as in Table 4. Panels A and B show that ChiNext-listed firms exhibit significantly lower levels of net profits and revenues three to five years after IPO relative to firms listed on the Main and SME Boards. The magnitude of the difference in net profits ranges from approximately -260 to -550 million RMB, and the difference in revenues ranges from -4.3 to -5.6 billion RMB, with coefficients generally statistically significant across specifications. These findings mirror the weaker financial fundamentals of ChiNext-listed firms at the time of IPO documented in Table 4 and indicate that differences in financial levels persist into the post-IPO period. This persistence suggests that the gap between firms listing on ChiNext and those listing on alternative boards reflects fundamental differences in firm type rather than temporary deviations around the

17

time of listing.

Panels C and D examine post-IPO growth rates. In the post-ChiNext period, we find robust evidence that ChiNext-listed firms experience significantly higher post-IPO growth rates in both net profits and revenues than companies listed in alternative boards. In particular,in the post-2009 period, the growth rate is approximately 84–92 percentage points in columns (3)–(6), and about 46–50 percentage points in columns (7) and (8) where firms with warnings are excluded. These growth rate is around two to three times as the prior-IPO growth rate, indicating even quicker development after the IPO for ChiNext-listed companies. Revenue growth is also consistently higher by approximately 11–12 percentage points in all specifications, which is of a magnitude similar to the previous IPO analysis. Together, these results indicate that ChiNext-listed firms exhibit strong growth dynamics not only prior to IPO but also after going public. This persistence is consistent with the growth-oriented design of ChiNext's listing requirements and suggests that the observed growth reflects long-term firm characteristics rather than temporary listing-related effects.

[INSERT Table 7 AROUND HERE]

Table 7 reports the corresponding post-IPO performance results for STAR. The column structure and sample refinements follow the same specifications as in Table 5. Panels A and B show that STAR-listed firms generate significantly lower net profits and revenues in the one-to-three years following IPO relative to the comparison sample. The magnitude of these differences—approximately -400 to -80 million RMB for net profits and -2.9 to -3.8 billion RMB for revenues—is economically large and statistically significant across most specifications. These findings show that the substantially weaker financial fundamentals of STAR-listed firms at IPO persistent into after IPO.

Panels C and D examine post-IPO growth. We find that STAR-listed firms exhibit significantly higher revenue growth after IPO, with growth rates approximately 9–10 percentage points higher than those of firms listed on other boards. However, this magnitude is only about one tenth of the revenue growth differentials observed prior to IPO. Moreover, net profit growth is lower for STAR-listed firms in the post-IPO period and is statistically significant in specifications that include both year and province fixed effects. Taken together, these patterns suggest that, relative to ChiNext, STAR-listed firms exhibit exceptionally high growth at the time of IPO but experience a pronounced deceleration in growth after listing, consistent with the possibility of window dressing

or growth front-loading around the IPO.

Taken together, the post-IPO evidence echoes the IPO-stage findings and indicates that firms listing on ChiNext and STAR enter public markets with weaker financial fundamentals that persist after listing, reflecting structural rather than transitory differences. ChiNext-listed firms exhibit strong growth both before and after IPO, consistent with the growth-oriented design of ChiNext's listing requirements and echoing the findings of Bernstein, Dev, and Lerner (2020). In contrast, STAR-listed firms display exceptionally high growth at IPO but experience a pronounced post-IPO deceleration—particularly in profitability—suggesting potential front-loaded growth under the registration-based regime.

4.3 Valuation and Stock Returns: VC-backed versus Non-VC-backed Firms

In this section, we examine whether VC backing is associated with differences in IPO valuation and subsequent stock performance on the two entrepreneurial boards. Theoretically, VCs may serve a certification and monitoring role, signaling firm quality and reducing information asymmetry at IPO (Megginson and Weiss, 1991), which would predict higher valuation and stronger long-run returns. Alternatively, VC may have timing or grandstanding incentives (Gompers, 1996) that boost short-term demand and initial returns without sustained outperformance. By comparing valuation, underpricing, and post-IPO returns across ChiNext and STAR, we assess which channel dominates under different institutional regimes.

[INSERT Table 8 AROUND HERE]

Table 8 reports the results for ChiNext. Panels A and B show that VC-backed firms receive significantly higher valuations at IPO. The P/E ratio is higher by approximately 3–5 points across specifications, and the EV/EBITDA multiple is higher by about 2–3.5 points in the post-2009 sample, with most coefficients statistically significant at conventional levels. These results indicate that VC-backed firms on ChiNext command a valuation premium at listing. Panel C shows no statistically significant difference in first-day returns between VC- and non-VC-backed firms, suggesting that VC backing does not materially affect IPO underpricing.

In contrast, Panels D–F document significantly higher long-run returns for VC-backed firms. Over one-, two-, and three-year horizons, VC-backed firms outperform non-VC-backed firms by

economically meaningful magnitudes, with the three-year return differential reaching approximately 29–49 percentage points in the post-2009 sample. Taken together, the evidence for ChiNext suggests that VC backing is associated with higher IPO valuations and superior long-term performance.

[INSERT Table 9 AROUND HERE]

Table 9 reports the corresponding results for STAR. In contrast to ChiNext, Panels A and B show no evidence that VC-backed firms receive higher IPO valuations. If anything, the point estimates are negative, although they are not statistically significant. Thus, VC backing does not appear to generate a valuation premium under STAR's registration-based regime. Panel C shows that VC-backed firms experience significantly higher first-day returns, with underpricing higher by approximately 18–22 percentage points in the post-2019 sample. However, this short-term return differential does not persist. Panels D–F show no statistically significant differences in one-, two-, or three-year returns between VC- and non-VC-backed firms. Overall, the STAR results indicate that VC backing is associated with higher initial trading gains but not with higher IPO valuations or superior long-run stock performance.

Taken together, the evidence reveals a sharp contrast in the role of VC backing across the two entrepreneurial boards. ChiNext appears to reward mature firms and structured VC screening, whereas the STAR regime is associated with a more transitory role of VC backing in secondary-market performance. On ChiNext, VC-backed firms command higher IPO valuations and deliver superior long-run returns without exhibiting excess underpricing. This pattern is consistent with a certification channel of VC participation in the IPO. Moreover, the stronger long-run performance of VC-backed firms aligns with our previous evidence that ChiNext attracted firms with weaker fundamentals but persistent growth, suggesting that VCs play a screening and monitoring role that translates into long-term value creation rather than short-term price pressure.

In contrast, on STAR, VC backing does not generate a valuation premium and is associated only with higher first-day returns, without long-run outperformance. Together with our earlier evidence of exceptionally high pre-IPO growth followed by post-IPO deceleration, this pattern is more consistent with growth front-loading or window dressing around IPO. Under the registration-based regime, VC involvement appears to amplify short-term demand rather than certify durable firm quality.

20

5 Impact on the Venture Capital Market

In this section, we present the results where we use a difference-in-differences design to identify the effect of the introduction of new IPO market segments on the volume of funding raised for private firms. We estimate if the availability of ChiNext (or STAR) changed the syndicated size of venture capital funding raised for firms with higher treatment intensity relative to firms with lower treatment intensity.

5.1 Identification Strategy

Following recent literature using the difference-in-difference method to study the impact of policy reforms, treatment intensity is measured as the extent of companies' exposure to the regulatory change (e.g., Hombert, Schoar, Sraer, and Thesmar, 2020; Ewens and Farre-Mensa, 2020). In particular, we employ two measures of treatment intensity based on the textual closeness of portfolio company business descriptions to the regulation description. The model takes the following form:

$$Y_{it} = \beta_0 + \beta_1 \text{Post}_i \times \text{Treatment}_i + \beta_2 \text{Treatment}_i + \gamma_t + \eta_{st} + \theta_j + \epsilon_{it}, \tag{1}$$

The sample is a company $\times$ quarter panel where i identifies company, and t stands for the time. The dependent variable Y_{it} is the number of venture capital investments i receives in quarter t. For ChiNext, the sample of financing rounds ranges from the third quarter in 2005 to the fourth quarter in 2012, and the $Post$ indicator identifies all company $\times$ quarter observations in or after the fourth quarter of 2009. For STAR, the sample of financing rounds ranges from the first quarter in 2013 to the third quarter in 2023, and the $Post$ indicator identifies all company $\times$ quarter observations in or after the first quarter of 2019. $Treatment$ is the textual closeness of portfolio company business descriptions to the regulation description. The coefficient of interest is the estimate for β_1, which captures the differential effect of the ChiNext (or STAR) introduction on the equity funding of portfolio companies with different treatment intensity. If the introduction of new IPO segments effectively create new capital flows into startups, we expect β_1 to be positive.

Given the nature of private business, we do not have access to annual balance sheet information for the sample in this section and we cannot include various firm- and industry-level controls. Instead, we rely on an extensive set of fixed effect variables that capture variations in external capital raised across individual start-up firms and industries. In Equation 1, we include quarter

fixed effects (γ_t), province-quarter (η_{st}) and industry (θ_j) fixed effects (we drop the non-interacted *Post* indicator as it would be absorbed by the time fixed effects, and we do not include industry-quarter fixed effects because they would absorb the time-variation in company business activities). The province-year fixed effects control for time trends of factors that affect all companies in the same province. The industry fixed effects control for the time-invariant factors that affect all companies in the same industry.

In an alternative specification in [Equation 2](#), we include company fixed effects μ_i so as to study within-company effects, i.e. the difference in receiving VC funding for the same company before and after the introduction of entrepreneurial boards. In the case of start-up firms, this is likely to capture the initial prospects of the firm since the entrepreneurial activity of these firms usually centers around one product or business idea. This greatly reduces concerns that some correlated omitted variables is driving the findings we document below. The alternative model takes the following form:

$$Y_{it} = \beta_0 + \beta_1 \text{Post}_i \times \text{Treatment}_i + \beta_2 \text{Treatment}_i + \gamma_t + \mu_i + \epsilon_{it}. \tag{2}$$

To mitigate confounding effects from other major stock market reforms, we carefully delimit the sample periods for the ChiNext and STAR analyses. For ChiNext, we begin the sample in 2005, which marks the initiation of share trading – a key step in the liberalization of China's stock markets– and end it in 2013 to exclude the introduction of the OTC-like National Equities Exchange and Quotations (NEEQ) market. For STAR, we start the sample in 2013, following the launch of NEEQ, and end it in 2023, as before the full implementation of the stock issuance registration system began on February 17, 2023.[8] These sample choices are designed to isolate the reforms of interest and to reduce contamination of the difference-in-differences estimates by overlapping policy shocks. We are not aware of other major regulatory changes within these sample windows.

5.2 Listing on ChiNext/STAR and Textual Similarity

We start by investigating whether companies whose registered business descriptions are textually closer to the regulatory texts (i.e., the ChiNext Listing Guidelines/the STAR Listing Opinions) are

---

[8]Related regulatory documents include: Operational Guidelines for the Pilot Reform of the Share-trading Business of Listed Companies (effective May 8, 2005); Interim Measures for the Administration of National Equities Exchange and Quotations Co., Ltd. (effective January 31, 2013); and Rules on the Full Implementation of the Stock Issuance Registration System (effective February 17, 2023).

treated more intensively by the regulation. While all companies could, in theory, benefit from the easier access to an IPO exit with the new entrepreneurial boards ChiNext and STAR, we expect that it is easier (harder) to list companies whose business activities are more "supported" (or "opposed") by the listing regulation.

[INSERT Table 10 AROUND HERE]

Table 10 Panel A reports the relation between our text-based treatment intensity measures and listing on ChiNext. We find a positive and statistically significant association at the 1% level between the textual similarity to ""supported" business activities in the ChiNext Listing Guidelines and the probability of listing on ChiNext, for both keyword-based and SBERT–based measures. In general, variation in the SBERT-based measure predicts the linear probability of listing in ChiNext more than three times as strongly as the variation in the keyword-based measure. For example, in column (3), which controls for firm age, SOE status, and province fixed effects, a one percentage point increase in the keyword-based measure is associated with a 2.28% increase in the linear probability of listing on ChiNext. By contrast, in column (6), which includes the same full set of controls, a percentage point increase in the SBERT-based measure predicts a 7.30% increase in the linear probability of listing on ChiNext. Similarly, we observe a negative and statistically significant association (at the 1% level) between the textual similarity to "opposed" business activities in the ChiNext Listing Guidelines. The coefficients for the SBERT–based measure are almost five times as large as the coefficients for the keyword-based measure.

Panel B reports the relationship between our text-based treatment intensity measures and listing on STAR. Similar to ChiNext, we find a positive association between textual proximity to the "supported" business activities in the STAR Listing Opinions and the likelihood of an IPO via STAR for both measures. However, while the measure based on the keyword-based measure is only statistically significant at the 10% level in specifications with controls, the SBERT–based measure is statistically significant at the 1% level. In terms of economic magnitude, the SBERT–based measure exhibits substantially greater predictive power—more than 13 times larger than that of the keyword-based measure—suggesting that listing on the STAR market is more closely related to semantic alignment with supported business activities rather than coarse categorical matching.

5.3 Benchmark Results

We present the results of our benchmark difference-in-differences analysis for ChiNext in Table 11. Panel A reports estimates using the keyword-based treatment intensity measure. Columns (1)–(4) present OLS specifications that sequentially introduce quarter (γ_t), province–quarter (η_{st}), and industry (θ_j) fixed effects. The results support the hypothesis that ChiNext promoted (restricted) private VC financing for firms engaged in "supported" ("opposed") business activities. Specifically, the coefficient on the interaction term *Post* × *% Supported* (*% Opposed*) is positive (negative) and statistically significant at the 1% level across all specifications. Focusing on column (3), which includes the full set of fixed effects, the estimated coefficient on *Post* × *% Supported* is 4.83 ($p < 0.01$), implying that a one percentage point increase in *% Supported* is associated with a 4.83 percentage point increase in the number of VC financing rounds received after the launch of ChiNext. In contrast, the coefficient on *Post* × *% Opposed* is –1.28 ($p < 0.01$), indicating that a one percentage point increase in *% Opposed* leads to a 1.28 percentage point reduction in post-launch VC financing rounds.

In column (4), we additionally include portfolio company fixed effects (μ_i) and continue to find a similar effect of ChiNext's launch on firms in "supported" and "opposed" business categories (β for *% Supported* = 4.46, $p < 0.01$; β for *% Opposed* = -1.34, $p < 0.01$). Columns (5)–(8) report Poisson specifications, motivated by recent recommendations to use Poisson regression in count-data settings with many zeros (Cohn, Liu, & Wardlaw, 2022). The results remain robust to this change in estimator: coefficients on the interaction term *Post* × *% Supported* (*% Opposed*) are positive (negative) and economically and statistically significant at the 1% level across all specifications.

Panel B reports results using the SBERT-based treatment intensity measure. Columns (1)–(4) present OLS estimates, while columns (5)–(8) present Poisson estimates. Coefficient signs are consistent across specifications and are generally more precisely estimated in the Poisson regressions. In terms of magnitude, column (7), which includes the full set of fixed effects in the Poisson specification, yields a coefficient of 1.42 ($p < 0.01$) on *Post* × *Similarity (BERT) Supported*. This estimate implies that a ten percent increase in *Similarity (BERT) Supported* is associated with a 15.53% increase in the expected number of VC financing rounds following the ChiNext launch ($(e^{1.42 \times 0.1} - 1) \times 100$). By comparison, the corresponding coefficient on *Post* × *% Supported* in

column (7) of Panel A is 0.87, indicating that VC responses to regulatory alignment using the SBERT-based treatment intensity measure are 1.63 times larger than those based on the keyword-based measure. Results across alternative specifications and for "opposed" business categories point to the same conclusion: while VCs respond to both measures, their response is substantially stronger when regulatory alignment is captured using richer semantic information by SBERT.

[INSERT Table 12 AROUND HERE]

Table 12 presents the results of estimating Equation (1) and Equation (2) for STAR. When we conduct the analysis for STAR, we consider companies more likely to list on either the ChiNext or the mainboard as the control group. Overall, the results for STAR are similar to those for ChiNext. Our findings support the hypothesis that STAR has boosted VC financing to companies in the "supported" business activities, with a greater investment response to the richer semantic information by the SBERT-based measure. For example, in Column (7) where we control for the full set of fixed effects in the Poisson regression, we find a β of 0.90 ($p < 0.01$) for *Post × % Supported* in Panel A. This indicates that a ten percent increase in *% Supported* results in a 9.42% increase in the number of VC fundings after the STAR launch. In comparison, in Column (7) in Panel B, the coefficient for *Post × Similarity (BERT) Supported* is 4.85, 5.39 times larger than the coefficient for *Post × % Supported*. Compared to the results for ChiNext, the response to *% Supported* is close to the coefficient in the same specification for ChiNext (0.90 and 0.87) while the response to *Similarity (BERT) Supported* is 4.32 (4.85 ÷ 1.42) times larger than the coefficient in the same specification for ChiNext.

Column (8) shows the Poisson regression results for the within company specification (Equation (2)). We find that a 10% increase in *% Supported* leads to 12.19% increase in VC financing, and 10% increase in *Similarity (BERT) Supported* to a 80.58% increase in VC financing (Panel B).

5.4 Generalized Difference-in-Differences

We present results using a generalized difference-in-differences (DID) design in which we re-estimate Equations (1) and (2) by interacting the treatment indicator with a full set of semester–year indicators, rather than a single post-reform indicator. The resulting coefficients capture year-specific differences in capital raised between the treatment and control groups, conditional on other controls.

25

Estimating these dynamic effects around the introduction of ChiNext (or STAR) allows us to trace the timing and evolution of the impact of entrepreneurial stock markets.

The generalized DID analysis offers two advantages. First, it provides a direct test of the identifying assumption by allowing us to examine whether treatment and control groups exhibit parallel pre-trends prior to the launch of ChiNext or STAR. Second, it enables us to assess whether the effects of launching entrepreneurial IPO boards emerge immediately following the release of the relevant IPO board, or only materialize after formal implementation.

[INSERT Figure 2 AROUND HERE]

We present the generalized DID results for ChiNext graphically in Figure 2, allowing the effects of the treatment variable to vary over time. The estimated pre-ChiNext coefficients are close to zero and statistically insignificant. Accordingly, we cannot reject the presence of common pre-trends in the dependent variable between the treatment and control groups, which supports the validity of our identification strategy. Following the launch, we observe positive differences between the treatment and control groups, with VC financing increasing clearly after the first semester of 2010, when the ChiNext Listing Guidelines were formally published. The delayed response of VCs likely reflects initial uncertainty and noisy interpretation of the ChiNext reform, which was resolved only after the release of the final regulatory document in 2010.

[INSERT Figure 3 AROUND HERE]

Figure 3 presents the corresponding generalized DID estimates for STAR and similarly reveals no evidence of differential pre-trends between the treatment and control groups. The increase in VC financing rounds for firms in "supported" business categories begins in the second semester of 2018, coinciding with President Xi's speech that marked the formal launch of the STAR market. Given the central role of presidential speeches in China's policy communication in the Xi's regime, it is plausible that VC responses emerge following this speech rather than after the subsequent publication of the formal regulatory documents.

5.5 Changes in Company Age and Funding Round

Our results indicate that VCs allocate more capital to firms whose business activities conform to the IPO regulations of newly established entrepreneurial boards. We next examine whether the introduction of an entrepreneurial board also affects the stage at which firms receive VC financing. To this end, we estimate difference-in-differences specifications analogous to Equations (1) and (2), interacting the *Post* indicator with portfolio-company *Age* or the sequence of VC *Rounds* at the time of investment.

5.5.1 Company Age

On the one hand, investments in younger firms and at earlier stages of firm development offer greater growth potential and economic impact (Adelino, Ma, and Robinson, 2017). On the other hand, younger firms are inherently riskier, which may deter VC investment. A central objective of entrepreneurial boards with lower listing requirements is to facilitate capital provision to younger firms (Bernstein, Dev, and Lerner, 2020). By expanding IPO exit options, the introduction of these boards is expected to increase VCs' willingness to invest at earlier stages of firm development.

[INSERT Table 13 AROUND HERE]

Table 13 reports the results. Columns (1)–(4) examine ChiNext. Column (1) reports cross-sectional OLS estimates and shows that younger firms receive more VC investment after the launch of ChiNext ($\beta = -0.12$, $p < 0.01$). Column (2) introduces portfolio-company fixed effects in addition to year fixed effects and therefore identifies within-firm changes in VC investment over time. In contrast to the cross-sectional results, the estimates indicate that firms receive more VC investment when they are more mature after the introduction of ChiNext ($\beta = 0.48$, $p < 0.01$). Columns (3) and (4) report Poisson specifications. While the cross-sectional estimates remain negative but statistically insignificant, the within-firm effect remains positive and statistically significant ($\beta = 0.09$, $p < 0.01$). Economically, a one-year increase in firm age is associated with a 9.42% increase in the number of VC investments relative to the pre-ChiNext period. In both OLS and Poisson specifications, firm age is negatively associated with VC investment on average, indicating that younger firms attract more VC investment per se.

Columns (5)–(8) examine VC responses to the launch of STAR. In the cross-sectional analyses, the results are similar to those for ChiNext: younger firms receive more VC investment after the launch of STAR ($\beta = -0.98$, $p < 0.01$ in OLS; $\beta = -0.09$, $p < 0.01$ in Poisson). Interpreting the Poisson estimates, a one-year decrease in firm age is associated with an 8.61% increase in the number of VC investments. In contrast to the ChiNext results, the within-firm estimates for STAR indicate that firms receive more VC investment at younger ages after the reform ($\beta = -0.51$, $p < 0.01$ in OLS; $\beta = -0.06$, $p < 0.01$ in Poisson). All coefficients for STAR are statistically and economically significant.

The difference in the within-firm results between ChiNext and STAR highlights an important outcome of the more relaxed IPO regime under STAR. STAR features by allowing non-profitable firms to be listed and strongly encourage more innovative firms. Consequently, we find that STAR facilitates VC investment at earlier stages of firm development. By contrast, the shift of VC investment toward more mature firms under ChiNext is consistent with the IPO overvaluation documented in the previous section. Elevated IPO valuations can generate short-term investment incentives, which are more likely to arise for more mature firms. In this sense, the STAR reform represents a more effective IPO reform with stronger real effects on VC allocation.

5.5.2 Funding Round

Venture capital investments are typically structured in multiple discrete financing rounds. It has been shown that staged financing mitigates agency problems by allowing VCs to condition continued funding on startup performance at earlier stages (Admati and Pfleiderer, 1994; Gompers, 1995; Kaplan and Strömberg, 2003; Kaplan and Strömberg, 2004; Tian, 2011) and by generating information about a startup's quality and growth trajectory over time (Bergemann and Hege, 1998; Ewens, Nanda, and Rhodes-Kropf, 2018). While our earlier results show that VCs invest in younger firms on average, it remains unclear whether this pattern reflects a shift in the timing of the investment window or a change in the intensity of staged financing.

In particular, VCs may shift the entire investment window earlier in firm development while preserving the staging structure, or they may increase staging intensity by reallocating financing rounds toward earlier stages. These two mechanisms generate distinct empirical predictions: the former only implies changes in firm age at investment, whereas the latter also implies changes in the sequence of VC financing rounds. We distinguish between these channels by estimating difference-

in-differences specifications that interact the post-reform indicator with the funding round sequence.

[INSERT Table 14 AROUND HERE]

Table 14 reports the results for VC financing rounds. Columns (1)–(4) present the results for ChiNext, and columns (5)–(8) present the results for STAR. The variable *Round* is defined as the sequential order of VC investments in a portfolio company. For ChiNext, the results are robust across OLS and Poisson specifications. In the cross-company specifications, column (1) shows that VC investment shifts toward earlier financing rounds after the introduction of ChiNext, whereas the within-company specification in column (2) indicates increased VC investment in later rounds. The corresponding coefficients are statistically significant at the 5% level in the cross-company OLS regression, at the 1% level in the within-company OLS regression, and at the 1% level in both Poisson specifications. To show economic magnitudes, take the Poisson estimates as an example. Column (3) shows that, across firms, a one-round earlier investment is associated with a 12.19% increase in the syndicated size of VC financing after ChiNext. By contrast, column (4) shows that, within a given firm, a one-round later investment is associated with a 1155% increase in the syndicated size of VC financing after ChiNext.

For STAR, we do not find statistically significant effects in the OLS specifications reported in columns (5) and (6). In contrast, the Poisson specifications in columns (7) and (8) indicate a shift of VC investment toward later financing rounds after the introduction of STAR, with statistical significance at the 1% level. Economically, column (7) shows that, across firms, a one-round increase is associated with a 4.08% increase in the number of VC financings after STAR, while column (8) shows that, within a given firm, a one-round increase corresponds to a 105.44% increase in the number of VC financings.

Consistent with the firm-age results, the across-firm estimates differ between ChiNext and STAR. For ChiNext, VCs make fewer financing rounds on average after the reform. Combined with the finding that VCs invest in younger firms, this pattern indicates that VCs shift the entire investment horizon toward earlier stages following the introduction of ChiNext. In contrast, for STAR, VCs conduct more financing rounds while simultaneously investing in younger firms after the introduction of STAR, suggesting both an earlier entry and an expansion of the investment horizon.

In the within-firm regressions, both ChiNext and STAR lead to an increase in the financing

29

round sequence. This pattern is consistent with VCs responding to investment into younger firms by increasing staging and conditioning capital provision on interim performance to mitigate agency problems.

6   Conclusion

This paper studies how IPO reforms, particularly new entrepreneurial boards, reshape both the composition of firms entering public markets and the allocation of venture capital. IPO reform is a first-order policy issue because it shapes who can access public equity, how capital is allocated across sectors, and ultimately how innovation and growth are financed. Our study speaks directly to this debate using China's two critical entrepreneurial boards—ChiNext and, more recently, STAR—where STAR's registration-based regime makes the question especially timely.

We find both similarities and differences of the impact of the two boards. In terms of the similarities, both ChiNext and STAR shift access to public markets toward younger and higher-growth firms with weaker financial fundamentals, consistent with entrepreneurial boards lowering effective listing hurdles. Moreover, after the launch of both boards, we find that firms whose business descriptions align more closely with supported activities are more likely to list and receive more VC financing. VC responses are stronger when regulatory alignment is measured using semantic similarity from the deep-learning Sentence-BERT model rather than simple keyword overlap, suggesting that VCs respond to the underlying regulatory orientation in a sophisticated and precise way.

However, the two boards also show striking different patterns in several dimensions. First, STAR exhibits a stronger ex ante shift toward earlier-stage, high-growth issuers than ChiNext, consistent with its more permissive registration-based regime. Second, in the period post IPO, ChiNext firms' growth is persistent, but STAR firms show a sharp growth deceleration, suggesting potential front-loaded growth around listing on STAR. Third, VC backing on ChiNext aligns with higher valuations and long-run performance without excess underpricing, suggesting a certification and monitoring channel, whereas VC-backed firms on STAR mainly shows up in higher initial returns without sustained outperformance, indicating a more transitory demand-amplification channel. Finally, the timing of VC financing along the startup's life cycle is also different. Compared to ChiNext, in the time period after the introduction of STAR, we observe stronger shifts toward earlier-stage investment and greater use of staging.

In general, our results also offer interesting economic mechanisms that can be extended in a broader setting. First, the strong mapping from regulatory text to listing outcomes and VC reallocations highlights a policy-orientation channel: listing priorities translate into differential access to IPO exits and redirect private capital toward targeted activities. Second, the contrast between persistent post-IPO growth on ChiNext and sharper deceleration on STAR points to a timing and front-loading channel under more permissive regimes—earlier listings bring in firms with more extreme pre-IPO growth profiles, but not all sustain that growth after listing. In addition, this can translate into difference in the staging and timing of VC investments.

Our paper provides several avenues for future research. First, it is interesting to examine the mechanisms behind STAR's post-IPO slowdown and directly test for window dressing or growth front-loading around listing. Second, it is interesting to understand how VCs interact with these dynamics, separating monitoring effects from exit-timing incentives. Third, evaluating the real and welfare consequences of earlier listing – such as innovation, investment, productivity, and survival of startups in response to the IPO reforms – is also a promising direction.

References

Adelino, M., Ma, S., & Robinson, D. (2017). Firm age, investment opportunities, and job creation. *The Journal of Finance, 72*(3), 999–1038.

Admati, A. R., & Pfleiderer, P. (1994). Robust financial contracting and the role of venture capitalists. *Journal of Finance, 49*(2), 371–402.

Bergemann, D., & Hege, U. (1998). Venture capital financing, moral hazard, and learning. *Journal of Banking & Finance, 22*(6-8), 703–735.

Bernstein, S., Dev, A., & Lerner, J. (2020). The creation and evolution of entrepreneurial public markets. *Journal of Financial Economics, 136*(2), 307–329.

Black, B. S., & Gilson, R. J. (1998). Venture capital and the structure of capital markets: Banks versus stock markets. *Journal of financial economics, 47*(3), 243–277.

Bonelli, M. (2025). Data-driven investors. *The Review of Financial Studies*, hhaf078.

Bowen, D. E., Frésard, L., & Hoberg, G. (2023). Rapidly evolving technologies and startup exits. *Management Science, 69*(2), 940–967.

Chattopadhyay, S., McConnell, J. J., Trombley, T. E., & Yavuz, M. D. (2025). Transmission of information from private to public markets. *Journal of Financial and Quantitative Analysis*.

Cohn, J. B., Liu, Z., & Wardlaw, M. I. (2022). Count (and count-like) data in finance. *Journal of Financial Economics*, *146*(2), 529–551.

Cong, L. W., & Howell, S. T. (2021). Policy uncertainty and innovation: Evidence from initial public offering interventions in china. *Management Science*, *67*(11), 7238–7261.

Doidge, C., Karolyi, G. A., & Stulz, R. M. (2017). The us listing gap. *Journal of Financial Economics*, *123*(3), 464–487.

Duffie, D. (2010). Presidential address: Asset price dynamics with slow-moving capital. *The Journal of finance*, *65*(4), 1237–1267.

Edwards, A., & Todtenhaupt, M. (2020). Capital gains taxation and funding for start-ups. *Journal of Financial Economics*, *138*(2), 549–571.

Eldar, O., & Grennan, J. (2024). Common venture capital investors and startup growth. *The Review of Financial Studies*, *37*(2), 549–590.

Ewens, M., & Farre-Mensa, J. (2020). The deregulation of the private equity markets and the decline in ipos. *The Review of Financial Studies*, *33*(12), 5463–5509.

Ewens, M., Nanda, R., & Rhodes-Kropf, M. (2018). Cost of experimentation and the evolution of venture capital. *Journal of Financial Economics*, *128*(3), 422–442.

Gompers, P. A. (1995). Optimal investment, monitoring, and the staging of venture capital. *Journal of Finance*, *50*(5), 1461–1489.

Gompers, P. A. (1996). Grandstanding in the venture capital industry. *Journal of Financial economics*, *42*(1), 133–156.

Gompers, P. A., Gornall, W., Kaplan, S. N., & Strebulaev, I. A. (2020). How do venture capitalists make decisions? *Journal of Financial Economics*, *135*(1), 169–190.

González-Uribe, J., & Reyes, S. (2021). Identifying and boosting "gazelles": Evidence from business accelerators. *Journal of Financial Economics*, *139*(1), 260–287.

Hoberg, G., & Phillips, G. (2016). Text-based network industries and endogenous product differentiation. *Journal of political economy*, *124*(5), 1423–1465.

Hombert, J., Schoar, A., Sraer, D., & Thesmar, D. (2020). Can unemployment insurance spur entrepreneurial activity? evidence from france. *The Journal of Finance*, *75*(3), 1247–1285.

Huang, S., Mao, Y., Wang, C., & Zhou, D. (2021). Public market players in the private world: Implications for the going-public process. *The Review of Financial Studies*, *34*(5), 2411–2447.

Iliev, P., & Lowry, M. (2020). Venturing beyond the ipo: Financing of newly public firms by venture capitalists. *The Journal of Finance*, *75*(3), 1527–1577.

Kaplan, S. N., & Strömberg, P. (2003). Financial contracting theory meets the real world: An empirical analysis of venture capital contracts. *The review of economic studies*, *70*(2), 281–315.

Kaplan, S. N., & Strömberg, P. E. (2004). Characteristics, contracts, and actions: Evidence from venture capitalist analyses. *The journal of finance*, *59*(5), 2177–2210.

Liu, B., & Tian, X. (2022). Do venture capital investors learn from public markets? *Management Science*, *68*(10), 7274–7297.

Megginson, W. L., & Weiss, K. A. (1991). Venture capitalist certification in initial public offerings. *The journal of finance*, *46*(3), 879–903.

Nanda, R., Samila, S., & Sorenson, O. (2020). The persistent effect of initial success: Evidence from venture capital. *Journal of Financial Economics*, *137*(1), 231–248.

Pham, P. K., Rezaei, R., & Zein, J. (2025). Venture capitalists versus deep-pocketed incumbents: Startup financing strategies in the presence of competitive threats. *Review of Finance*, rfaf070.

Qian, Y., Ritter, J. R., & Shao, X. (2024). Initial public offerings chinese style. *Journal of Financial and Quantitative Analysis*, *59*(1), 1–38.

Reimers, N., & Gurevych, I. (2019). Sentence-bert: Sentence embeddings using siamese bert-networks. *arXiv preprint arXiv:1908.10084*.

Shleifer, A., & Vishny, R. W. (1997). The limits of arbitrage. *The Journal of finance*, *52*(1), 35–55.

Tian, X. (2011). The causes and consequences of venture capital stage financing. *Journal of Financial Economics*, *101*(1), 132–159.

Tuft, A., & Yimfor, E. (2025). Financial intermediary relationships and public market access. *Review of Finance*, rfaf057.

Figures
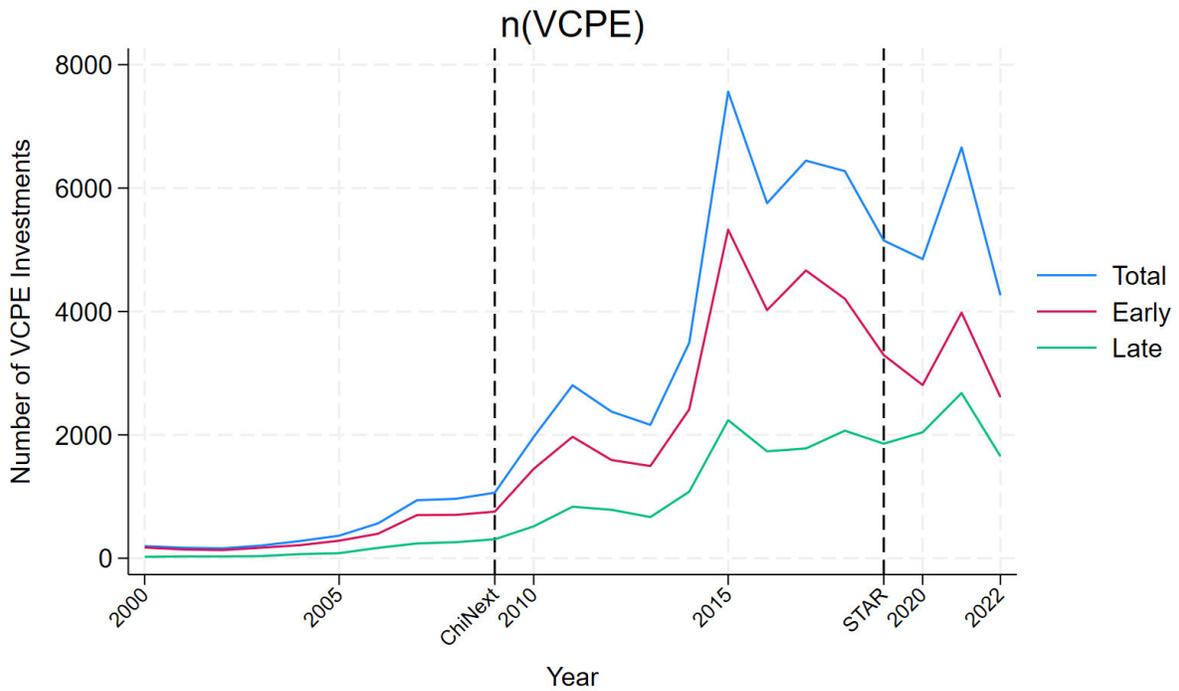
Figure 1: Time trends on raising VC financings during 2000 -2022

Note: This figure illustrates the time trend of venture capital financing using data from Zero2IPO. The vertical axis represents the number of VC financing rounds received by all companies within each year-quarter. The horizontal axis represents the year-quarters from 2000 to 2022. The blue solid line represents the total number of VC financing. The red dashdot line indicates the early rounds of VC financing (i.e., Pre-A, A, and A+ rounds). The green dashed line represents the late rounds of VC financing (i.e., Pre-B, B, B+, and up to Pre-IPO).
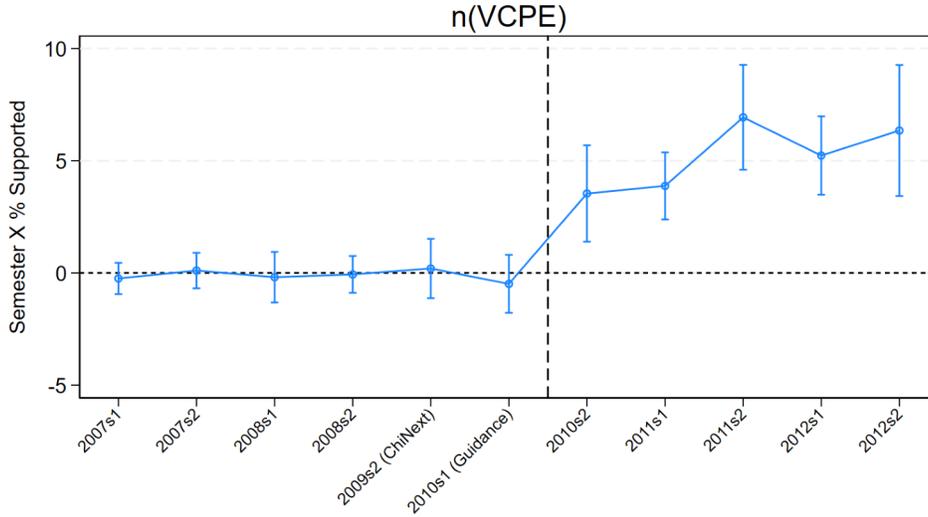
(a) Using % of Sub-Business Activities Based on Keywords
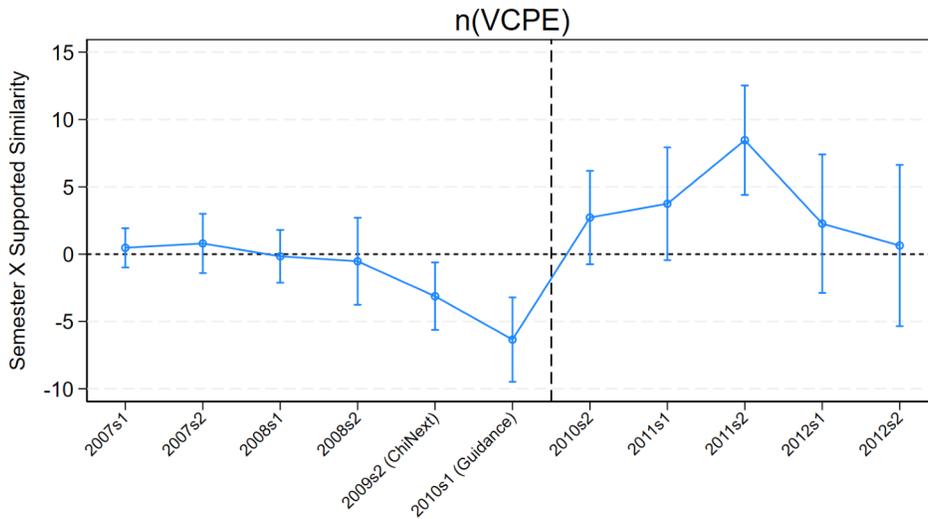
(b) Using SBERT-Based Textual Similarity

Figure 2: Dynamics on raising VC financings around ChiNext

Note: The figure shows the results of estimating a dynamic version of our diff-in-diff analysis examining ChiNext's effect on the number of VC financings of startups with respect to percentage of supported business activities. For Panel (a), we estimate the following equation: $Y_{it} = \alpha + \Sigma_{k=-6}^{5} \beta_k d_k \times \% \text{ Supported}_{k,i} + \delta \times \% \text{ Supported}_i + \gamma_t + \eta_{st} + \theta_j + \epsilon_{it}$. i identifies company, and t identifies year-quarters. The dependent variable (Y_{it}) is the number of VC financing the company i receives in year-quarter t. d_k's are the dummies indicating the semester of the observation relative to the release of the *Guidance* in March 2010 (set as the reference period $t = 0$). For Panel (b), we estimate a similar specification where we use *Supported Similarity* instead of *% Supported*. All regressions include year-quarter fixed effects (γ_t), which subsume the non-interacted d_k indicators as well as company province-year-quarter (η_{st}) and industry (θ_j) fixed effects (we do not include industry-year-quarter fixed effects because they would subsume the time-variation in company business activities). Observations belonging to the semester prior to ChiNext's launch (the first semester of 2009) are excluded. The plot presents the point estimates and 95% confidence intervals of the differences between the coefficients on the interaction terms *Semester × % Supported*, where standard errors are clustered at the province level.
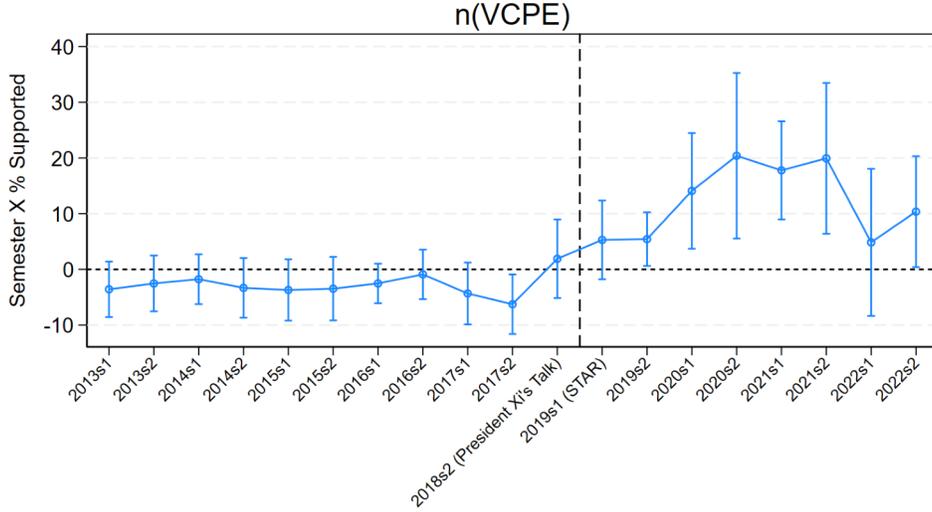
(a) Using % of Sub-Business Activities Based on Keywords
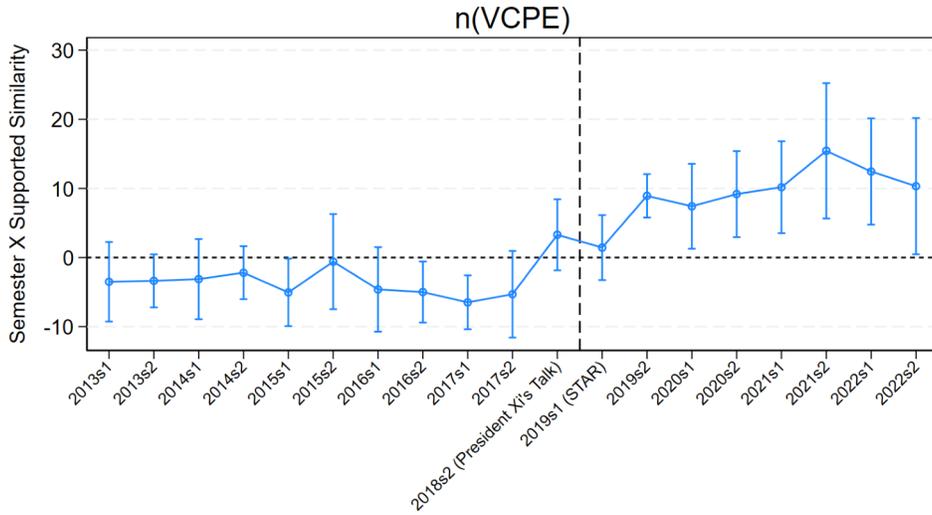
(b) Using SBERT-Based Textual Similarity

Figure 3: Dynamics on raising VC financings around STAR

Note: The figure shows the results of estimating a dynamic version of our diff-in-diff analysis examining STAR's effect on the number of VC financings of startups with respect to percentage of supported business activities. For Panel (a), we estimate the following equation: $Y_{it} = \alpha + \Sigma_{k=-6}^{5} \beta_k d_k \times \%\ \text{Supported}_{k,i} + \delta \times \%\ \text{Supported}_i + \gamma_t + \eta_{st} + \theta_j + \epsilon_{it}$. i identifies company, and t identifies year-quarters. The dependent variable (Y_{it}) is the number of VC financing the company i receives in year-quarter t. d_k's are the dummies indicating the semester of the observation relative to the release of *Opinions* in January 2019 (set as the reference period $t = 0$). For Panel (b), we estimate a similar specification where we use *Supported Similarity* instead of *% Supported*. All regressions include year-quarter fixed effects (γ_t), which subsume the non-interacted d_k indicators as well as company province-year-quarter (η_{st}) and industry (θ_j) fixed effects (we do not include industry-year-quarter fixed effects because they would subsume the time-variation in company business activities). Observations belonging to the semester prior to President Xi's Talk (the first semester of 2018) are excluded. The plot presents the point estimates and 95% confidence intervals of the differences between the coefficients on the interaction terms *Semester × % Supported*, where standard errors are clustered at the province level.

Tables

Table 1: Listing Requirements: Main/SME Boards, ChiNext, and STAR

Panel A: Main/SME Boards versus ChiNext during May, 2009 to June, 2020	
Main Boards / SME Board	**ChiNext**
May 1st, 2009 to May 13, 2014	
Listing Requirement 1	
Operated at least three years	Operated at least three years
Listing Requirement 2	
In the three years prior to IPO, net profits have been positive AND the accumulated sum of net profits $\geq$ 30 million yuan.	In the two years prior to IPO, net profits have been positive AND the accumulated sum of net profits $\geq$ 10 million yuan AND the growth rate of net profits is positive; OR, In the year prior to IPO, net profits $\geq$ 5 million yuan AND revenue $\geq$ 50 million yuan AND In the two years prior to IPO, the growth rate of revenue $\geq$ 30%;
Listing Requirement 3	
In the three years prior to IPO, the accumulated sum of net cashflow from operation > 50 million yuan OR, In the three years prior to IPO, the accumulated sum of revenue > 300 million yuan	-
Listing Requirement 4	
In the year prior to IPO, there are no unrecovered losses	In the year prior to IPO, net assets $\geq$ 20 million yuan AND no unrecovered losses.
Listing Requirement 7	
In the year prior IPO, intangible assets $\leq$ 20% of net assets	-
Listing Requirement 6	
Capitalization before IPO issuance $\geq$ 30 million yuan	Capitalization after IPO issuance $\geq$ 30 million yuan
May 14, 2014 to June 5, 2018	
Unchanged	"the growth rate of net profits is positive", "net profits $\geq$ 5 million yuan", and "the growth rate of revenue $\geq$ 30%" of Requirement 2 are removed
June 6, 2018 to June 12, 2020	
For the issuance of depositary receipts within China by innovative enterprises, remove	
Requirement 2	Requirement 2
no unrecovered losses (Requirement 4)	no unrecovered losses in Requirement 4

Panel B: ChiNext versus STAR during March, 2019 to Feb 1, 2023		
Main Boards / SME Board	**ChiNext**	**STAR**
Mar 1, 2019 to Jun 11, 2020		
Main Board and ChiNext apply the approval system; STAR market applies the registration system		
Listing Requirement 1		
Operated at least three years	Operated at least three years	Operated at least three years
Listing Requirement 6		
Capitalization before IPO issuance $\geq$ 50 million yuan	Capitalization after IPO issuance $\geq$ 30 million yuan	Capitalization after IPO issuance $\geq$ 30 million yuan
Listing requirements 2-5 of main Board and ChiNext as above		
Listing requirements of STAR depend on the estimated market valuation		
If the estimated market valuation is $\geq$ 1 billion	Net profit for the last 2 years is positive, and cumulative net profit is no less than 50 million. Alternatively, net profit for the last year is positive, and operating revenue in the last year $\geq$ 100 million.	
If the estimated market valuation is $\geq$ 1.5 billion	operating revenue in the last year $\geq$ 200 million, and R&D investment $\geq$ 15% in the accumulative operating revenue in the last 3 years.	
If the estimated market valuation is $\geq$ 2 billion	operating revenue $\geq$ 300 million in the last year, and net cash flow from operation $\geq$ 100 million in the last 3 years.	
If the estimated market valuation is $\geq$ 3 billion	operating revenue $\geq$ 300 million in the last year.	
If the estimated market valuation is $\geq$ 4 billion	flexible rules are applied (such as huge market size, pharmaceutical companies with core products, or technical advantages).	

Table 2: Supported and Opposed Business Activities for lisitng on ChiNext and STAR

This table shows the detailed description of the business activity categories that are especially supported or cautiously opposed in the *Guidelines for the Further Details of Issuance Sponsorship for Companies Listing on ChiNext* (ChiNext Listing Guidelines), and the business activity categories that are especially supported in the *Implementation Opinions on Establishing the Science and Technology Innovation Board and Piloting the Registration-Based IPO System on the Shanghai Stock Exchange* (STAR Listing Opinions).

Nine especially supported business activity categories for ChiNext	New Energy
	New Materials
	Information Technology
	Biotechnology and New Pharmaceuticals
	Energy Conservation and Environmental Protection
	Aerospace
	Marine
	Advanced Manufacturing
	High-Tech Services
Seven cautiously opposed business activity categories for ChiNext	Textiles and Apparel
	Power, Gas, and Water Production and Supply
	Real Estate, Civil Engineering and Construction
	Transportation
	Alcohol, Food, and Beverages
	Finance
	General Services
Ten especially supported business activity categories for STAR	Next-generation Information Technology
	High-end Equipment
	New Materials
	New Energy
	Energy Conservation and Environmental Protection
	Biopharmaceuticals
	Internet
	Big Data
	Cloud Computing
	Artificial Intelligence

Table 3: Summary Statistics for Key Variables

This table provides summary statistics for the primary variables in our analysis. Panel A reports the summary statistics for variables in analysis related to ChiNext, and Panel B for variables related to STAR. Variable definitions are provided in Table A1.

Variables	N	Mean	S.D.	Min	25th per.	Median	75th per.	Max
Panel A: Summary Statistics for variables of listed companies (Wind)								
Net Profit	80,933	6.67×10^5	7.07×10^6	-6.87×10^7	2.55×10^4	6.83×10^4	2.00×10^5	3.61×10^8
Revenue	81,543	7.48×10^6	5.87×10^7	-4.67×10^5	3.56×10^5	9.21×10^5	2.72×10^6	3.32×10^9
Net Asset	81,120	6.40×10^6	5.77×10^7	-7.28×10^8	3.45×10^5	9.44×10^5	2.52×10^6	3.51×10^9
Net Profit (Growth Rate)	75,500	-61.53	5.37×10^4	-1.14×10^7	-18.92	13.81	53.37	9.17×10^6
Revenue (Growth Rate)	75,792	46.87	2.10×10^3	-303.51	-0.37	13.09	30.59	3.78×10^5
P/E Ratio	5,215	43.25	6.61×10^2	-4.55×10^4	29.30	38.06	64.23	2.05×10^3
EV/EBITDA	4,907	29.51	5.25×10^2	-2.59×10^4	19.59	27.55	46.31	4.58×10^3
IPO_underpricing	5,287	101.32	208.55	-96.61	39.48	44.02	107.01	3,857.00
IPO_1year_return	4,692	34.98	131.19	-83.27	-34.68	-3.01	57.74	2,396.34
IPO_2year_return	3,971	70.01	182.55	-92.51	-25.91	22.18	95.40	2,808.42
IPO_3year_return	3,476	112.36	246.22	-90.76	-9.08	45.83	146.48	4,757.32
Panel B: Summary Statistics for variables in ChiNext analysis (NECIPS))								
n(VCPE Investments)	1,979,460	0.04	0.27	0.00	0.00	0.00	0.00	28.00
% Supported	1,966,710	0.06	0.14	0.00	0.00	0.00	0.00	1.00
% Opposed	1,966,710	0.18	0.25	0.00	0.00	0.00	0.33	1.00
Similarity Supported	1,966,380	0.31	0.07	-0.02	0.26	0.32	0.37	0.55
Similarity Opposed	1,966,380	0.33	0.07	-0.02	0.28	0.33	0.37	0.62
Age	1,324,243	5.65	5.58	-0.25	1.50	4.00	8.00	63.50
Round	813,488	1.11	0.39	1.00	1.00	1.00	1.00	21
Panel C: Summary Statistics for variables in STAR analysis (Zero2IPO))								
n(VCPE Investments)	1,125,200	0.10	0.70	0.00	0.00	0.00	0.00	89
Similarity Supported	1,125,200	0.37	0.06	0.09	0.34	0.38	0.41	0.53
% Supported	1,125,200	0.07	0.13	0.00	0.00	0.00	0.10	1.00
Post $\times$ % Supported	1,125,200	0.03	0.09	0.00	0.00	0.00	0.00	1.00
Age	912,152	7.58	5.99	0.00	3.00	6.25	10.75	64.25
Round	604,110	1.81	1.33	1.00	1.00	1.00	2.00	18.00

Table 4: Company Characteristics at IPO: Main/SME Boards versus ChiNext

The table reports the results of OLS regressions examining how companies listed on ChiNext differ from those listed on the main boards in terms of company characteristics at the time of IPO. In columns (1) and (2), the sample includes all companies listed from 1990 to June 2019 (up until the introduction of the STAR market). Columns (3) to (8), the sample include companies listed from 2009 (when ChiNext was introduced) to June 2019. In columns (5) and (6), the sample further excludes reverse mergers through IPO (following Qian, Ritter, and Shao (2024)). In columns (7) and (8), the sample further excludes companies that once had warnings ("ST" and "*ST"). Data source: Wind. The dependent variable in Panel A is company age at IPO, which is the number of years since the official registered founding date in NECIPS. In Panels B to F, the dependent variables are net profit, revenue, net assets, net profit growth rate, revenue growth rate over three years prior to IPO. The key independent variable $ChiNext$ is a dummy variable that equals one if the company is listed on ChiNext. IPO Year, Province, and Year fixed effects are indicated in each column. t statistics are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1990 - 2019		2009 (Intro. of ChiNext) - 2019 (Intro. of STAR)					
	All		All		No Reverse Mergers		No STs	
Panel A: Dependent Variable: Company Age								
ChiNext	-1.35***	-1.42***	-1.35***	-1.37***	-1.33***	-1.34***	-1.38***	-1.40***
	(-5.92)	(-6.27)	(-5.28)	(-5.30)	(-5.19)	(-5.17)	(-5.22)	(-5.25)
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes
N	3502	3502	2018	2018	1996	1996	1895	1895
adj. R^2	0.519	0.532	0.116	0.121	0.116	0.120	0.111	0.114
Panel B: Dependent Variable : Net Profit Three Years Prior to IPO (in million yuan)								
ChiNext	-278.13***	-343.17***	-278.13***	-313.86***	-283.48***	-319.25***	-298.14***	-333.27***
	(-4.06)	(-5.01)	(-6.80)	(-7.58)	(-6.86)	(-7.65)	(-6.88)	(-7.62)
N	13600	13600	8072	8072	7984	7984	7580	7580
adj. R^2	0.023	0.041	0.022	0.033	0.022	0.033	0.022	0.034
Panel C: Dependent Variable : Revenue Three Years Prior to IPO (in billion yuan)								
ChiNext	-2.83***	-3.39***	-2.83***	-3.30***	-2.87***	-3.35***	-3.00***	-3.47***
	(-6.49)	(-7.84)	(-7.42)	(-8.60)	(-7.47)	(-8.65)	(-7.43)	(-8.56)
N	13622	13622	8072	8072	7984	7984	7580	7580
adj. R^2	0.034	0.065	0.041	0.062	0.042	0.062	0.042	0.063
Panel D: Dependent Variable : Net Asset Three Years Prior to IPO (in billion yuan)								
ChiNext	-1.74***	-2.07***	-1.74***	-1.92***	-1.77***	-1.95***	-1.85***	-2.03***
	(-4.14)	(-4.92)	(-5.71)	(-6.23)	(-5.75)	(-6.26)	(-5.74)	(-6.23)
N	13456	13456	8065	8065	7977	7977	7574	7574
adj. R^2	0.017	0.033	0.016	0.023	0.016	0.023	0.016	0.024
Panel E: Dependent Variable : Net Profit Growth Rate Three Years Prior to IPO (in %)								
ChiNext	31.82**	32.56**	31.82***	36.13***	31.58***	35.99***	24.83***	28.51***
	(2.36)	(2.40)	(4.31)	(4.83)	(4.24)	(4.77)	(3.93)	(4.46)
N	11930	11930	7607	7607	7527	7527	7164	7164
adj. R^2	0.012	0.019	0.009	0.020	0.009	0.020	0.008	0.020
Panel F: Dependent Variable : Revenue Growth Rate Three Years Prior to IPO (in %)								
ChiNext	12.94	15.93	12.94***	13.32***	12.82***	13.23***	12.07***	12.51***
	(0.66)	(0.80)	(13.17)	(13.65)	(12.96)	(13.46)	(12.32)	(12.85)
N	11887	11887	7605	7605	7525	7525	7163	7163
adj. R^2	0.005	0.009	0.058	0.104	0.058	0.105	0.057	0.102
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes
Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 5: Company Characteristics at IPO: Main/SME/ChiNext versus STAR

The table reports the results of OLS regressions examining how companies listed on STAR differ from those listed on ChiNext and the main boards in terms of company characteristics at the time of IPO. In columns (1) and (2), the sample includes all companies listed from 1990 to 2023. In columns (3) to (8), the sample include companies listed from 2019 (when STAR was introduced) to 2023. In columns (5) and (6), the sample further excludes reverse mergers through IPO (following Qian, Ritter, and Shao (2024)). In columns (7) and (8), the sample further excludes companies that once had warnings ("ST" and "*ST"). Data source: Wind. The dependent variable in Panel A is company age at IPO, which is the number of years since the official registered founding date in NECIPS. In Panels B to F, the dependent variables are net profit, revenue, net assets, net profit growth rate, revenue growth rate over three years prior to IPO. The key independent variable $STAR$ is a dummy variable that equals one if the company is listed on STAR. IPO Year, Province, and Year fixed effects are indicated in each column. t statistics are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1990 - 2023		2019 (Intro. of STAR) - 2023					
	All		All		No Reverse Mergers		No STs	
Panel A: Dependent Variable: Company Age								
STAR	-2.63***	-2.62***	-2.63***	-2.58***	-2.63***	-2.58***	-2.60***	-2.54***
	(-9.73)	(-9.63)	(-8.42)	(-7.98)	(-8.42)	(-7.98)	(-8.30)	(-7.85)
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes
N	5283	5283	1899	1899	1899	1899	1887	1887
adj. R^2	0.502	0.507	0.048	0.054	0.048	0.054	0.047	0.053
Panel B: Dependent Variable : Net Profit Three Years Prior to IPO (in million yuan)								
STAR	-357.85***	-441.08***	-357.85***	-462.08***	-357.85***	-462.08***	-360.48***	-459.14***
	(-4.76)	(-5.77)	(-3.97)	(-4.99)	(-3.97)	(-4.99)	(-3.97)	(-4.92)
N	11539	11539	7594	7594	7594	7594	7546	7546
adj. R^2	0.007	0.018	0.004	0.018	0.004	0.018	0.004	0.018
Panel C: Dependent Variable : Revenue Three Years Prior to IPO (in billion yuan)								
STAR	-2.28***	-3.04***	-2.28***	-3.26***	-2.28***	-3.26***	-2.29***	-3.23***
	(-4.02)	(-5.28)	(-3.71)	(-5.19)	(-3.71)	(-5.19)	(-3.70)	(-5.10)
N	11522	11522	7577	7577	7577	7577	7529	7529
adj. R^2	0.009	0.026	0.002	0.023	0.002	0.023	0.002	0.024
Panel D: Dependent Variable : Net Asset Three Years Prior to IPO (in billion yuan)								
STAR	-2.44***	-3.32***	-2.44***	-3.59***	-2.44***	-3.59***	-2.45***	-3.54***
	(-3.58)	(-4.81)	(-2.96)	(-4.24)	(-2.96)	(-4.24)	(-2.95)	(-4.16)
N	11539	11539	7594	7594	7594	7594	7546	7546
adj. R^2	0.004	0.020	0.003	0.022	0.003	0.022	0.003	0.023
Panel E: Dependent Variable : Net Profit Growth Rate Three Years Prior to IPO (in %)								
STAR	72.98***	81.84***	72.98***	84.17***	72.98***	84.17***	71.68***	82.94***
	(3.22)	(3.52)	(2.66)	(2.96)	(2.66)	(2.96)	(2.60)	(2.90)
N	11451	11451	7512	7512	7512	7512	7464	7464
adj. R^2	0.002	0.002	0.002	0.001	0.002	0.001	0.002	0.001
Panel F: Dependent Variable : Revenue Growth Rate Three Years Prior to IPO (in %)								
STAR	111.97***	111.89***	111.97***	112.09***	111.97***	112.09***	112.68***	113.39***
	(4.82)	(4.70)	(3.90)	(3.77)	(3.90)	(3.77)	(3.90)	(3.79)
N	11428	11428	7488	7488	7488	7488	7440	7440
adj. R^2	0.002	0.001	0.002	-0.000	0.002	-0.000	0.002	-0.000
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes
Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 6: Company Characteristics after IPO: Main/SME Boards versus ChiNext

The table reports the results of OLS regressions examining how companies listed on ChiNext differ from those listed on the main boards in terms of post-IPO profits and revenue. In columns (1) and (2), the sample includes all companies listed from 1990 to June 2019 (up until the introduction of the STAR market). Columns (3) to (8), the sample include companies listed from 2009 (when ChiNext was introduced) to June 2019. In columns (5) and (6), the sample further excludes reverse mergers through IPO (following Qian, Ritter, and Shao (2024)). In columns (7) and (8), the sample further excludes companies that once had warnings ("ST" and "*ST"). Data source: Wind. The dependent variable in Panels A to C is the net profit over the window of one, one to three, or three to five years after the company's IPO year (excluded), as specified in each panel. The dependent variable in Panels D to F is the revenue over the same time windows. The key independent variable $ChiNext$ is a dummy variable that equals one if the company is listed on ChiNext. IPO Year, Province, and Year fixed effects are indicated in each column. t statistics are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1990 - 2019		2009 (Intro. of ChiNext) - 2019 (Intro. of STAR)					
	All		All		No Reverse Mergers		No STs	
Panel A: Dependent Variable: Net Profit (in million yuan) three to five years after IPO								
ChiNext	-493.82**	-219.62	-493.82***	-264.53*	-501.04***	-266.96*	-556.25***	-290.37*
	(-2.16)	(-0.97)	(-3.19)	(-1.67)	(-3.21)	(-1.67)	(-3.39)	(-1.73)
N	6662	6662	3694	3694	3650	3650	3458	3458
adj. R^2	0.025	0.117	0.010	0.090	0.010	0.090	0.011	0.095
Panel B: Dependent Variable: Revenue (in billion yuan) three to five years after IPO								
ChiNext	-5.12***	-4.25**	-5.12***	-4.57***	-5.13***	-4.57***	-5.55***	-4.86***
	(-3.09)	(-2.54)	(-5.69)	(-4.86)	(-5.66)	(-4.81)	(-5.81)	(-4.87)
N	6660	6660	3694	3694	3650	3650	3458	3458
adj. R^2	0.028	0.082	0.045	0.084	0.045	0.085	0.047	0.087
Panel C: Dependent Variable: Net Profit Growth Rate (in %) three to five years after IPO								
ChiNext	88.29	28.68	88.29***	84.02***	92.10***	87.31***	45.98**	50.36**
	(0.23)	(0.07)	(3.29)	(2.94)	(3.42)	(3.04)	(2.10)	(2.16)
N	6662	6662	3694	3694	3650	3650	3458	3458
adj. R^2	-0.001	0.002	0.006	0.012	0.006	0.012	0.005	0.014
Panel D: Dependent Variable: Revenue Growth Rate (in %) three to five years after IPO								
ChiNext	11.83***	10.71***	11.83***	11.13***	12.20***	11.60***	11.09***	10.91***
	(4.49)	(3.94)	(6.04)	(5.37)	(6.22)	(5.58)	(5.54)	(5.15)
N	6660	6660	3694	3694	3650	3650	3458	3458
adj. R^2	0.011	0.024	0.015	0.033	0.016	0.034	0.014	0.031
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes
Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 7: Company Characteristics after IPO: Main/SME/ChiNext versus STAR

The table reports the results of OLS regressions examining how companies listed on STAR differ from those listed on ChiNext and the main boards in terms of company characteristics at the time of IPO. In columns (1) and (2), the sample includes all companies listed from 1990 to 2023. In columns (3) to (8), the sample include companies listed from 2019 (when STAR was introduced) to 2023. In columns (5) and (6), the sample further excludes reverse mergers through IPO (following Qian, Ritter, and Shao (2024)). In columns (7) and (8), the sample further excludes companies that once had warnings ("ST" and "*ST"). Data source: Wind. The dependent variable in Panel A (Panel B) is the net profit over the window of one year (one to three years) after the company's IPO year (excluded), as specified in each panel. The dependent variable in Panel C (Panel D) is the revenue over the same time windows. The key independent variable $STAR$ is a dummy variable that equals one if the company is listed on STAR. IPO Year, Province, and Year fixed effects are indicated in each column. t statistics are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1990 - 2023		2019 (Intro. of STAR) - 2023					
	All		All		No Reverse Mergers		No STs	
Dep. Var.				Net Profit (in million yuan)				
Panel A: Dependent Variable: Net Profit (in million yuan) one to three years after IPO								
STAR	-400.86***	-450.39***	-400.86**	-479.74**	-400.86**	-479.74**	-411.46**	-481.96**
	(-2.99)	(-3.31)	(-1.97)	(-2.24)	(-1.97)	(-2.24)	(-2.00)	(-2.22)
N	4292	4292	1268	1268	1268	1268	1252	1252
adj. R^2	0.039	0.043	0.014	0.008	0.014	0.008	0.014	0.008
Panel B: Dependent Variable: Revenue (in billion yuan) one to three years after IPO								
STAR	-2.87**	-3.58***	-2.87**	-3.82***	-2.87**	-3.82***	-2.92**	-3.82***
	(-2.23)	(-2.75)	(-2.53)	(-3.21)	(-2.53)	(-3.21)	(-2.54)	(-3.18)
N	4292	4292	1268	1268	1268	1268	1252	1252
adj. R^2	0.031	0.038	0.010	0.008	0.010	0.008	0.010	0.008
Panel C: Dependent Variable: Net Profit Growth Rate (in %) one to three years after IPO								
STAR	-33.55	-41.04	-33.55	-46.84**	-33.55	-46.84**	-36.47*	-51.00**
	(-1.32)	(-1.59)	(-1.56)	(-2.09)	(-1.56)	(-2.09)	(-1.74)	(-2.34)
N	4292	4292	1268	1268	1268	1268	1252	1252
adj. R^2	-0.000	-0.001	0.000	0.012	0.000	0.012	0.001	0.011
Panel D: Dependent Variable: Revenue Growth Rate (in %) one to three years after IPO								
STAR	9.53***	9.09***	9.53***	9.21***	9.53***	9.21***	9.65***	9.13***
	(3.47)	(3.28)	(3.32)	(3.09)	(3.32)	(3.09)	(3.36)	(3.06)
N	4292	4292	1268	1268	1268	1268	1252	1252
adj. R^2	0.020	0.031	0.030	0.048	0.030	0.048	0.031	0.048
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes
Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 8: Stock Return and Valuation: VC-backed versus non-VC backed (ChiNext)

The table reports the results of OLS regressions examining the difference in stock return and valuation for VC- and non-VC-backed companies listed on the main/SME boards and ChiNext. There are 1,462 out of 3,502 companies that are VC-backed. The dataset is a company cross-section. The dependent variable is indicated in each panel. In columns (1) and (2), the sample contains all companies listed from 1990 to June 2019 (until the introduction of the STAR market). Columns (3) to (8) look at companies listed from 2009 (when ChiNext was introduced). Moreover, following Qian, Ritter, and Shao (2024), columns (5) and (6) exclude reverse mergers through IPO. Columns (7) and (8) exclude companies that once had warnings ("ST" and "*ST"). VC is a dummy variable that equals one if the company is backed by VC companies. IPO Year, Sector, Province, and Year fixed effects are indicated in each column. t statistics are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1990 - 2019		2009 (Intro. of ChiNext) - 2019 (Intro. of STAR)					
	All		All		No Reverse Mergers		No STs	
Panel A: P/E Ratio at IPO; All IPO years								
VC	4.89**	4.48**	3.64***	3.17***	3.50***	3.01***	3.38***	2.91***
	(2.43)	(2.23)	(4.71)	(4.07)	(4.51)	(3.84)	(4.29)	(3.66)
N	3430	3430	2018	2018	1996	1996	1895	1895
adj. R^2	0.298	0.314	0.556	0.566	0.557	0.567	0.563	0.573
Panel B: EV/EBITDA at IPO; All IPO years								
VC	4.52	3.22	3.43***	2.43***	3.34***	2.35***	3.21***	2.26***
	(0.50)	(0.35)	(4.73)	(3.38)	(4.57)	(3.24)	(4.31)	(3.05)
N	3161	3161	1891	1891	1870	1870	1773	1773
adj. R^2	-0.000	-0.002	0.457	0.491	0.457	0.491	0.463	0.494
Panel C: Dependent variable – first-day return (IPO underpricing); All IPO years								
VC	2.11	-0.01	-0.52	-0.41	-0.71	-0.67	-0.64	-0.44
	(0.25)	(-0.00)	(-0.40)	(-0.31)	(-0.56)	(-0.52)	(-0.47)	(-0.32)
N	3502	3502	2018	2018	1996	1996	1895	1895
adj. R^2	0.153	0.180	0.131	0.140	0.141	0.150	0.119	0.130
Panel D: Dependent variable – 360-day (1-year) return; All IPO years								
VC	4.58	2.57	9.22*	3.29	9.64*	3.76	11.93**	5.46
	(1.14)	(0.64)	(1.69)	(0.60)	(1.75)	(0.68)	(2.09)	(0.95)
N	3502	3502	2018	2018	1996	1996	1895	1895
adj. R^2	0.349	0.361	0.320	0.341	0.316	0.338	0.317	0.340
Panel E: Dependent variable – 720-day (2-year) return; All IPO years								
VC	17.19**	12.29*	21.94**	11.61	22.48**	11.86	26.10***	14.90
	(2.57)	(1.83)	(2.51)	(1.33)	(2.55)	(1.34)	(2.86)	(1.64)
N	3502	3502	2018	2018	1996	1996	1895	1895
adj. R^2	0.165	0.181	0.131	0.165	0.129	0.164	0.125	0.163
Panel F: Dependent variable – 1080-day (3-year) return; All IPO years								
VC	31.62***	23.94***	43.04***	28.78**	44.18***	29.44**	48.91***	33.81***
	(3.44)	(2.60)	(3.49)	(2.34)	(3.55)	(2.36)	(3.77)	(2.61)
N	3476	3476	1992	1992	1970	1970	1870	1870
adj. R^2	0.116	0.138	0.049	0.089	0.049	0.089	0.045	0.087
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector FE	No	Yes	No	Yes	No	Yes	No	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 9: Stock Return and Valuation: VC-backed versus non-VC backed (STAR)

The table reports the results of OLS regressions examining the difference in stock return and valuation for VC- and non-VC-backed companies listed on the main/SME boards and ChiNext. There are 1,462 out of 3,502 companies that are VC-backed. The dataset is a company cross-section. The dependent variable is indicated in each panel. In columns (1) and (2), the sample includes all companies listed from 1990 to 2023. In columns (3) to (8), the sample include companies listed from 2019 (when STAR was introduced) to 2023. In columns (5) and (6), the sample further excludes reverse mergers through IPO (following Qian, Ritter, and Shao (2024)). In columns (7) and (8), the sample further excludes companies that once had warnings ("ST" and "*ST"). Data source: Wind. VC is a dummy variable that equals one if the company is backed by VC companies. IPO Year, Sector, Province, and Year fixed effects are indicated in each column. t statistics are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1990 - 2023		2019 (Intro. of STAR) - 2023					
	All		All		No Reverse Mergers		No STs	
Panel A: P/E Ratio at IPO; All IPO years								
VC	-11.89	-11.41	-34.00	-34.59	-34.00	-34.59	-34.27	-34.82
	(-0.61)	(-0.58)	(-0.70)	(-0.69)	(-0.70)	(-0.69)	(-0.70)	(-0.69)
N	5179	5179	1899	1899	1899	1899	1887	1887
adj. R^2	-0.003	-0.008	-0.000	-0.015	-0.000	-0.015	-0.000	-0.015
Panel B: EV/EBITDA at IPO; All IPO years								
VC	-3.53	-3.90	-13.56	-6.92	-13.56	-6.92	-13.81	-7.25
	(-0.20)	(-0.22)	(-0.33)	(-0.16)	(-0.33)	(-0.16)	(-0.34)	(-0.17)
N	4882	4882	1855	1855	1855	1855	1844	1844
adj. R^2	-0.005	-0.008	-0.001	-0.015	-0.001	-0.015	-0.001	-0.015
Panel C: Dependent variable – first-day return (IPO underpricing); All IPO years								
VC	10.40	7.79	22.04***	17.96***	22.04***	17.96***	21.55***	17.55***
	(1.63)	(1.21)	(3.36)	(2.66)	(3.36)	(2.66)	(3.26)	(2.58)
N	5283	5283	1899	1899	1899	1899	1887	1887
adj. R^2	0.153	0.165	0.120	0.121	0.120	0.121	0.119	0.121
Panel D: Dependent variable – 360-day (1-year) return; All IPO years								
VC	2.70	0.64	2.34	1.91	2.34	1.91	2.45	2.07
	(0.72)	(0.17)	(0.32)	(0.26)	(0.32)	(0.26)	(0.34)	(0.28)
N	5079	5079	1695	1695	1695	1695	1683	1683
adj. R^2	0.257	0.264	0.049	0.046	0.049	0.046	0.050	0.047
Panel E: Dependent variable – 720-day (2-year) return; All IPO years								
VC	9.47	4.78	-2.70	-5.04	-2.70	-5.04	-2.43	-5.16
	(1.61)	(0.81)	(-0.26)	(-0.46)	(-0.26)	(-0.46)	(-0.23)	(-0.47)
N	4466	4466	1082	1082	1082	1082	1072	1072
adj. R^2	0.175	0.187	0.055	0.043	0.055	0.043	0.056	0.045
Panel F: Dependent variable – 1080-day (3-year) return; All IPO years								
VC	39.63***	31.41***	-12.16	-16.96	-12.16	-16.96	-14.18	-19.03
	(4.17)	(3.31)	(-0.52)	(-0.63)	(-0.52)	(-0.63)	(-0.60)	(-0.70)
N	3672	3672	288	288	288	288	284	284
adj. R^2	0.119	0.142	-0.003	-0.062	-0.003	-0.062	-0.003	-0.065
IPO Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector FE	No	Yes	No	Yes	No	Yes	No	Yes
Province FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 10: Listing on Entrepreneurial Stock Market Boards and the Regulatory Textual Closeness of the Company

This table reports OLS regression results on the correlation between a company's listing outcome and its regulatory textual closeness to the listing documents for ChiNext (Panel A) and STAR (Panel B). In Panel A, the sample is portfolio companies that received at least one round of VC financing during the third quarter of 2005 to the fourth quarter of 2012 (data source: NECIPS). In Panel B, we limit to companies that received at least one round of VC financing during the first quarter of 2013 to the fourth quarter of 2022 (data source: Zero2IPO). The dependent variable is *I(ChiNext)* in Panel A and *I(STAR)* in Panel B, which is a dummy variable equal to one if the company is listed on the corresponding stock market board (× 100 for demonstration purposes). In columns (1) to (3), the key independent variables are *% Supported* and *% Opposed* for Panel A (and only *% Supported* for Panel B), which are the percentage of sub-business activities in the registry business description that contain key words of especially supported or cautiously opposed businesses. In columns (4) to (6), the key independent variables are *Similarity Supported* and *Similarity Opposed* for Panel A (and only *Similarity Supported* for Panel B), which are the cosine similarity between text vectors of the registry business description and the official descriptions of the especially supported or cautiously opposed businesses. More variable definitions are provided in Table A1. Standard errors clustered at the province level are reported in parentheses. Province fixed effects are indicated in each column. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Dependent Variable: *I*(ChiNext) × 100 (NECIPS Sample)						
% Supported	2.27***	2.24***	2.28***			
	(0.19)	(0.19)	(0.19)			
% Opposed	-0.56***	-0.56***	-0.58***			
	(0.10)	(0.11)	(0.11)			
Similarity Supported				7.68***	7.62***	7.30***
				(0.56)	(0.56)	(0.56)
Similarity Opposed				-2.44***	-2.32***	-2.79***
				(0.60)	(0.60)	(0.60)
Age at 2012 Q4			0.07***			0.06***
			(0.00)			(0.00)
I(SOE)			-0.31**			-0.22*
			(0.13)			(0.13)
Observations	65557	65557	65557	65546	65546	65546
R^2	0.003	0.004	0.007	0.004	0.006	0.008
Panel B: Dependent Variable: *I*(STAR) × 100 (Zero2IPO Sample)						
% Supported	0.70	0.52	0.98*			
	(0.57)	(0.58)	(0.57)			
Similarity Supported				13.60***	13.08***	12.93***
				(1.25)	(1.31)	(1.31)
Age at 2019 Q1			0.21***			0.21***
			(0.01)			(0.01)
I(SOE)			-0.38			0.19
			(0.84)			(0.84)
Observations	28130	28130	28124	28130	28130	28124
R^2	0.000	0.003	0.014	0.004	0.006	0.017
Province FE	No	Yes	Yes	No	Yes	Yes

Table 11: Regulatory Textual Closeness to IPO and Raising VC Financing: ChiNext

This table investigates differences in the impact of ChiNext on VC financing for companies with different degrees of supported and opposed business activities. Specifically, we estimate a difference-in-differences model of Equation 1 where the sample is a company×quarter panel from the third quarter of 2005 to the fourth quarter of 2012 (data source: NECIPS). The dependent variable is the number of VC deals received by the company in the observation's quarter (× 100 for demonstration purposes in OLS regressions). In Panel A, the treatment variables are *% Supported* and *% Opposed* which represent the percentage of sub-business activities in the registry business description that contain key words related to especially supported or cautiously opposed businesses. In Panel B, the treatment variables are *Similarity Supported* and *Similarity Opposed*, which are the cosine similarities between text vectors of the registry business description and the official descriptions of the especially supported or cautiously opposed businesses. The *Post* indicator identifies all company×quarter observations after the first quarter of 2010 (i.e., the release of the *ChiNext Listing Guidelines*). More variable definitions are provided in Table A1. Columns (1) to (4) report the results of OLS regressions. Columns (5) to (8) report the results of Poisson regressions. All regressions include quarter fixed effects (which subsume the non-interacted *Post* indicator). Province-quarter, industry, and company fixed effects (which subsume the non-interacted *% Supported* and *% Opposed*) are indicated in each column. Robust standard errors clustered at the province level are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	n(Deals) ×100				n(Deals)			
	OLS				Poisson			
Panel A: Using % of Sub-Business Activities								
Post × % Supported	4.46***	4.83***	4.83***	4.46***	0.76***	0.84***	0.87***	0.80***
	(0.52)	(0.67)	(0.67)	(0.52)	(0.09)	(0.12)	(0.13)	(0.10)
Post × % Opposed	-1.34***	-1.28***	-1.28***	-1.34***	-0.21***	-0.20***	-0.19***	-0.21***
	(0.31)	(0.27)	(0.27)	(0.31)	(0.06)	(0.06)	(0.06)	(0.06)
% Supported	-0.82***	-0.96***	-1.52***		-0.29***	-0.34***	-0.48***	
	(0.16)	(0.19)	(0.22)		(0.06)	(0.06)	(0.07)	
% Opposed	0.03	0.01	0.39***		0.01	0.00	0.09***	
	(0.09)	(0.09)	(0.11)		(0.03)	(0.03)	(0.03)	
Observations	1966710	1966710	1966710	1966710	1966710	1965032	1965032	1966710
R^2/Pseudo R^2	0.007	0.008	0.009	0.024	0.034	0.040	0.046	0.080
Panel B: Using Description Textual Similarity								
Post × Similarity Supported	4.47	5.61**	5.61**	4.47	1.24**	1.50***	1.42***	1.12**
	(2.67)	(2.66)	(2.66)	(2.67)	(0.51)	(0.50)	(0.46)	(0.46)
Post × Similarity Opposed	-2.52	-2.72	-2.72	-2.52	-1.19***	-1.22***	-1.17***	-1.09***
	(2.20)	(2.01)	(2.01)	(2.20)	(0.40)	(0.36)	(0.33)	(0.37)
Similarity Supported	-3.34***	-3.86***	-4.87***		-1.08***	-1.25***	-1.42***	
	(0.85)	(0.85)	(1.05)		(0.28)	(0.27)	(0.29)	
Similarity Opposed	4.52***	4.60***	3.70***		1.47***	1.49***	1.25***	
	(0.71)	(0.67)	(0.88)		(0.23)	(0.21)	(0.24)	
Observations	1966380	1966380	1966380	1966380	1966380	1964702	1964702	1966380
R^2 /Pseudo R^2	0.006	0.008	0.009	0.023	0.033	0.039	0.045	0.080
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province-Quarter FE	No	Yes	Yes	No	No	Yes	Yes	No
Industry FE	No	No	Yes	No	No	No	Yes	No
Company FE	No	No	No	Yes	No	No	No	Yes

Table 12: Regulatory Textual Closeness to IPO and Raising VC Financing: STAR

This table investigates differences in the impact of STAR on VC financing for companies with different degrees of supported and opposed business activities. Specifically, we estimate a difference-in-differences model of Equation 1 where the sample is a company×quarter panel from the first quarter of 2013 to the fourth quarter of 2022 (data source: Zero2IPO). The dependent variable is the number of VC deals received by the company in the observation's quarter ($\times$ 100 for demonstration purposes in OLS regressions). In Panel A, the treatment variables are *% Supported* which represent the percentage of sub-business activities in the registry business description that contain key words related to especially supported businesses. In Panel B, the treatment variable is *Similarity Supported* , which is the cosine similarities between text vectors of the registry business description and the official descriptions of the especially supported businesses. The *Post* indicator identifies all company×quarter observations after the first quarter of 2019 (i.e., the release of the *STAR Listing Opinions*). More variable definitions are provided in Table A1. Columns (1) to (4) report the results of OLS regressions. Columns (5) to (8) report the results of Poisson regressions. All regressions include quarter fixed effects (which subsume the non-interacted *Post* indicator). Province-quarter, industry, and company fixed effects (which subsume the non-interacted *% Supported* and *% Opposed*) are indicated in each column. Robust standard errors clustered at the province level are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	n(Deals) $\times$100				n(Deals)			
	OLS				Poisson			
Panel A: Using % of Sub-Business Activities								
Post $\times$ % Supported	16.75***	14.80***	14.80***	16.75***	1.08***	0.87***	0.90***	1.15***
	(2.92)	(3.55)	(3.55)	(2.92)	(0.16)	(0.22)	(0.23)	(0.19)
% Supported	-0.48	0.54	-1.00		-0.06	0.07	-0.09	
	(0.64)	(1.11)	(1.01)		(0.08)	(0.14)	(0.13)	
Observations	1125200	1125200	1125200	1125200	1125200	1120177	1120177	1116680
R^2 /Pseudo R^2	0.004	0.007	0.007	0.047	0.031	0.046	0.051	0.202
Panel B: Using Description Textual Similarity								
Post $\times$ Similarity Supported	60.85***	54.80***	54.80***	60.85***	5.12***	4.60***	4.85***	5.91***
	(6.82)	(5.02)	(5.02)	(6.82)	(0.68)	(0.47)	(0.48)	(0.75)
Similarity Supported	4.35	3.45	-10.26**		0.55	0.44	-1.22**	
	(3.21)	(3.35)	(4.65)		(0.41)	(0.42)	(0.50)	
Observations	1125200	1125200	1125200	1125200	1125200	1120177	1120177	1116680
R^2/Pseudo R^2	0.005	0.007	0.008	0.047	0.036	0.050	0.052	0.204
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province-Quarter FE	No	Yes	Yes	No	No	Yes	Yes	No
Industry FE	No	No	Yes	No	No	No	Yes	No
Company FE	No	No	No	Yes	No	No	No	Yes

Table 13: Portfolio Company Age and Raising VC Financing

The table investigates how the impact of ChiNext/STAR on VC financing varies with company age. The sample is a company×quarter panel, and in columns (1) to (4), it covers the third quarter of 2005 to the fourth quarter of 2012 (data source: NECIPS) while in columns (5) to (8), it ranges over the first quarter of 2013 to the fourth quarter of 2022 (data source: Zero2IPO). The dependent variable is the number of VC deals received by the company in the observation's quarter (× 100 for demonstration purposes in OLS regressions). The independent variable *Age* is the number of quarters, divided by four, since the company's official registered founding date in NECIPS at the time of observation's quarter. In columns (1) to (4), the *Post* indicator identifies all company×quarter observations after the first quarter of 2010 (i.e., the release of the *ChiNext Listing Guidelines*). In columns (5) to (8), the *Post* indicator identifies all company×quarter observations after the first quarter of 2019 (i.e., the release of the *STAR Listing Opinions*). More variable definitions are provided in Table A1. Columns (1), (2), (5), and (6) report the results of OLS regressions. Columns (3), (4), (7), and (8) report the results of Poisson regressions. All regressions include quarter-fixed effects (which subsume the non-interacted *Post* indicator). Province-quarter, industry-quarter, and company fixed effects (which subsume the non-interacted *Age*) are indicated in each column. Robust standard errors clustered at the province level are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	n(Deals) ×100		n(Deals)		n(Deals) ×100		n(Deals)	
	ChiNext				STAR			
	OLS		Poisson		OLS		Poisson	
Post × Age	-0.12***	0.48***	-0.00	0.09***	-0.98***	-0.51***	-0.09***	-0.06***
	(0.02)	(0.08)	(0.01)	(0.02)	(0.11)	(0.10)	(0.00)	(0.01)
Age	-0.29***		-0.07***		-0.04		-0.00	
	(0.03)		(0.01)		(0.02)		(0.38)	
Observations	1324221	1324198	1318196	1321137	927703	927703	921190	922903
R^2/Pseudo R^2	0.013	0.049	0.050	0.110	0.010	0.064	0.061	0.214
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province-Quarter FE	Yes	No	Yes	No	Yes	No	Yes	No
Industry-Quarter FE	Yes	No	Yes	No	Yes	No	Yes	No
Company FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 14: Deal Round and Raising VC Financing

The table investigates how the impact of ChiNext/STAR on VC financing varies with deal round. The sample is a company×year-quarter panel, and in columns (1) to (4), it covers the third quarter of 2005 to the fourth quarter of 2012 (data source: NECIPS) while in columns (5) to (8), it ranges over the first quarter of 2013 to the fourth quarter of 2022 (data source: Zero2IPO). The dependent variable is the number of VC deals received by the company in the observation's year-quarter ($\times$ 100 for demonstration purposes in OLS regressions). The independent variable *Round* is the sequence number of the latest VC round received by the company at the time of the observation's year-quarter. In columns (1) to (4), the *Post* indicator identifies all company×year-quarter observations after the first quarter of 2010 (i.e., the release of the *ChiNext Listing Guidelines*). In columns (5) to (8), the *Post* indicator identifies all company×year-quarter observations after the first quarter of 2019 (i.e., the release of the *STAR Listing Opinions*). More variable definitions are provided in Table A1. Columns (1), (2), (5), and (6) report the results of OLS regressions. Columns (3), (4), (7), and (8) report the results of Poisson regressions. All regressions include year-quarter fixed effects (which subsume the non-interacted *Post* indicator). Province-year-quarter, industry-year-quarter, and company fixed effects (which subsume the non-interacted *Round*) are indicated in each column. Robust standard errors clustered at the province level are reported in parentheses. *, **, and *** denote significance at the 90%, 95%, and 99% confidence levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	n(Deals) $\times100$		n(Deals)		n(Deals) $\times100$		n(Deals)	
	ChiNext				STAR			
	OLS		Poisson		OLS		Poisson	
Post $\times$ Round	-2.85**	2.61***	-0.13***	2.53***	-0.53	0.52	0.04***	0.72***
	(1.14)	(0.64)	(0.02)	(0.24)	(0.49)	(0.90)	(0.01)	(0.06)
Round	12.43***		0.44***		7.58***		0.22***	
	(0.81)		(0.02)		(0.27)		(0.00)	
Observations	813402	809518	811262	809518	604096	603765	599813	603765
R^2/Pseudo R^2	0.045	0.182	0.078	0.631	0.025	0.142	0.095	0.432
YQ FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province-YQ FE	Yes	No	Yes	No	Yes	No	Yes	No
Industry-YQ FE	Yes	No	Yes	No	Yes	No	Yes	No
Company FE	No	Yes	No	Yes	No	Yes	No	Yes

Appendix

Table A1: Variable Definitions

Variable	Definition
Age	The number of years since the registered founding quarter at the observation year-quarter.
Age at 2012 Q4	company age (in terms of years) at the fourth quarter in 2021
Age at 2019 Q1	company age (in terms of years) at the first quarter in 2019
I(ChiNext)	A dummy that equals one if the company is listed on ChiNext, and zero otherwise.
I(STAR)	A dummy that equals one if the company is listed on STAR, and zero otherwise.
I(SOE)	A dummy that equals one if the company is state-owned, and zero otherwise.
n(Deals)	the number of venture capital financings received by a company in the observation year-quarter
Post	A dummy that equals one if the company×year-quarter observation in or after the fourth quarter of 2009 (in the ChiNext sample) or the first quarter of 2019 (in the STAR sample), and zero otherwise.
% Supported	The percentage of sub-business activities in the registry business description that contain key words of regulatory-supported businesses.
% Opposed	The percentage of sub-business activities in the registry business description that contain key words of regulatory-opposed businesses.
Similarity Supported	The cosine similarity between text vectors of the registry business description and the official descriptions of the especially supported businesses.
Similarity Opposed	The cosine similarity between text vectors of the registry business description and the official descriptions of the especially opposed businesses.
Round	The sequence of VC financing round received by a company in the observation year-quarter.

Internet Appendices: Institutional Background

A Brief History of the Development of the Chinese Stock Market

China entered a centrally planned economic era shortly after WWII until 1978, and no financial markets existed during this period. Modern financial markets in China emerged in the 1980s: the Shenzhen Special Economic Zone began over-the-counter share trading in 1986. The Shanghai Stock Exchange (SSE) was reestablished in 1990, followed by the Shenzhen Stock Exchange (SZSE) in 1991. These developments marked the beginning of China's contemporary financial market era.

The main board consists of Shanghai Stock Exchange (SSE) established in November 1990 and Shenzhen Stock Exchange (SZSE) established in April 1991. The main board focuses on supporting high-quality enterprises with mature business models and stable operating performance.

In 1992, the China Securities Regulatory Commission (CSRC) was established to implement a nationwide system that controls the equity issuance process. Between 1990 and June 1999, IPO allocation follows a *quota-based IPO system*, where the total IPO volume each year is pre-determined and allocated to each province and industry. Between July 1990 and 2019, the Securities Law was introduced with the application of the *approval-based IPO system*: enterprises can apply for listing if they meet the listing conditions, but IPOs were still under the approval of CSRC.

In 1999, the Communist Party Central Committee and the State Council issued the "Decision on Strengthening Technological Innovation, Developing High-tech Industries, and Achieving Industrialization", proposing a special section for high-tech enterprises on the existing stock exchanges to promote high-tech industries. However, the plan was postponed due to the burst of the technology stock bubble on NASDAQ, as the central leadership believed that China's capital market was not yet mature enough for new sections.

In October 2003, the Third Plenary Session of the 16th Central Committee of the Communist Party of China (CPC) issued the "Decision on Several Issues Concerning the Improvement of the Socialist Market Economy System", which proposed the establishment of a multi-level capital market system and the promotion of the construction of China's second board market. In 2004, SZSE established the Small and Medium Enterprise Board (SME Board). While the name of the SME Board gives the impression that small firms are more likely to list there, it shares the exact same listing requirements and IPO procedure as the main boards. Instead of lowering the listing

requirements, the SME Board steers small firms to list through a mechanism called "window guidance" in the IPO filing procedure, which means that the officers at the China Securities Regulatory Commission (CSRC) decide whether the company is listed on the SME board or the main board. In March 2014, the "window guidance" mechanism was eliminated so companies could choose their listing venue. Moreover, the SME board was integrated into the main board in 2021.

In March 2008, the central government clearly stated that ChiNext would be launched to promote the development of innovative and growth-oriented enterprises. However, due to the global financial crisis in the same year, the plan to establish ChiNext was postponed again. Finally, China's second board market, ChiNext, was inaugurated in SZSE on 23 October 2009.

On November 5, 2018, President Xi Jinping announced at the opening ceremony of the first China International Import Expo held in Shanghai that a science and technology innovation board, the STAR Market, would be established on SSE, and a registration-based IPO system would be piloted. This move aims to support the development of Shanghai as an international financial center and a hub for technological innovation, while continuously improving the fundamental capital market system.

On January 30, 2019, the CSRC issued "Implementation Opinions on the Establishment of the Science and Technology Innovation Board on the Shanghai Stock Exchange and the Pilot Registration System". On June 13, 2019, the STAR Market was officially launched, and the registration system was piloted. In August 2020, the first batch of enterprises listed on the SZSE ChiNext Market adopted a registration-based IPO System. On 17 February 2023, the main board adopted a *registration-based IPO System.*

Approval versus registration system

The approval-based IPO system is mainly designed to protect investors from investment risks, so the system requires the approval of CSRC to ensure that the timing and the offer price of the IPO do not cause issues for the current market or prospective investors. However, the approval system has caused long waiting times for IPOs, and the government occasionally suspended IPOs for the goal of investor protection and facilitating capital formation. Also, a cap on the P/E ratio generally applies to the offer price, resulting in high underpricing and indirect equity financing costs (Qian, Ritter, and Shao, 2024). Furthermore, it's very difficult for firms outside the manufacturing industry

to meet the strict listing requirements. Firms, especially high-tech firms, respond by going public on exchanges outside the main board. Alternatively, they choose to attain listing status through reverse mergers, resulting in a high "shell value" of listed firms, which largely reduces the stock price informativeness.

The registration system aims at overcoming these issues. By changing to a U.S.-style registration system, companies gain easier access to the capital market: firms do not need to be profitable before listing, nor get approval from CSRC for IPOs; the offer price is not subjective to a P/E cap; more disclosure is required; dual-class share scheme or weighted voting rights are allowed. Qian, Ritter, and Shao, 2024 show that under the registration system, institutional demand decreases, but IPOs still receive high first-day returns.

Chinese Venture Capital and U.S. Venture Capital

There are differences and similarities between the venture capital sector in China and in Western countries. Among the more salient differences, China's venture capital firms are relatively small on average. The average size of AUM (assets under management) is US$20 million, mainly focusing on early-stage investment. The average size of private equity investment funds is US$42 million, mainly focusing on growth investment. By comparison, the average size (AUM) of US VC funds is US$99 million, and that of US PE funds is US$240 million, according to SEC data. Second, the boundary between venture capital and private equity is blurred. There are no formal leveraged buyout funds due to prohibitive regulations in the banking sector. Thus, PE funds are mainly growth funds that use little financial leverage. Moreover, the same GP firm, and sometimes the same fund, may conduct both VC and PE investments. Thus, in this paper, we do not distinguish between venture capital and private equity deals (and call them venture capital investments since venture-type funding situations clearly dominate).

In terms of similarities, the organizational form of China's venture capital funds is comparable to that of partnerships in developed markets, comprising three players: ultimate investors (LPs), intermediaries (GPs), and portfolio companies. Ultimate investors, called limited partners (LPs), include institutional and individual investors. Teh investment intermediaries are VC funds and their general partners (GPs). Many funds have a closed-end structure with a limited lifetime, frequently ten years.