Invesco Investment Insights

China's Science and Technology Innovation Board a bold step forward for capital-market reforms

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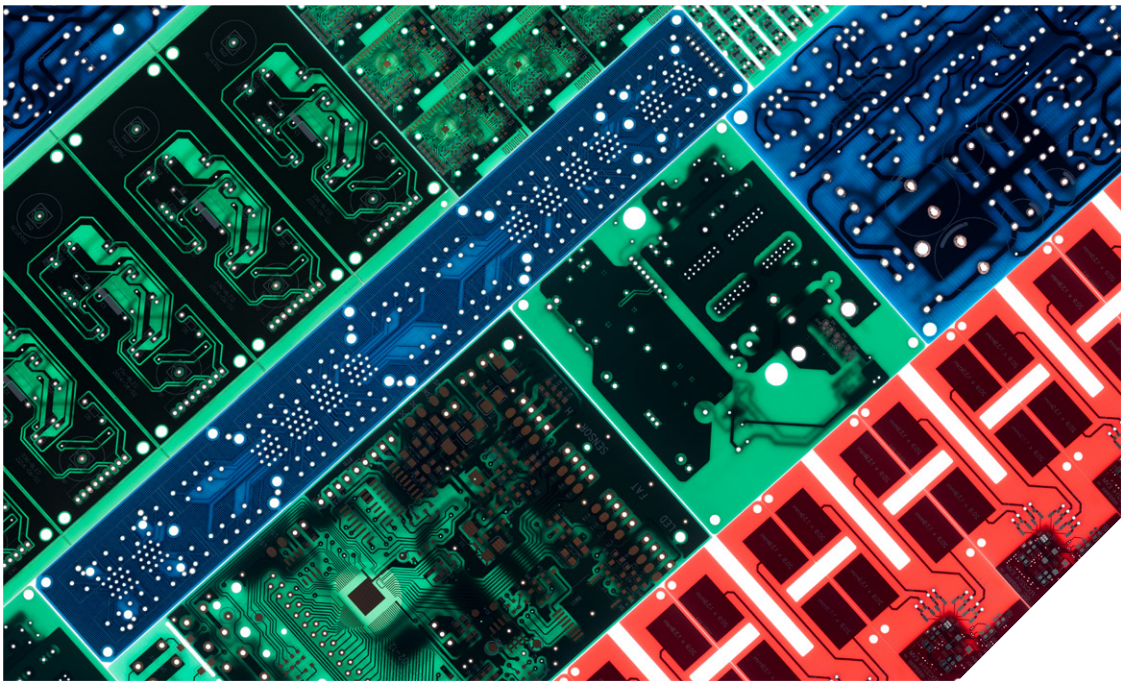


Key takeaways

- Rules proposed for the new Science and Technology Innovation Board on the Shanghai Stock Exchange are boldest reforms yet at opening up China's capital markets.
- Proposed changes also help to nurture domestic technology sector and answer a crucial national need.
- Proper execution and willingness to leave the board to market dynamics are key to the board's success.

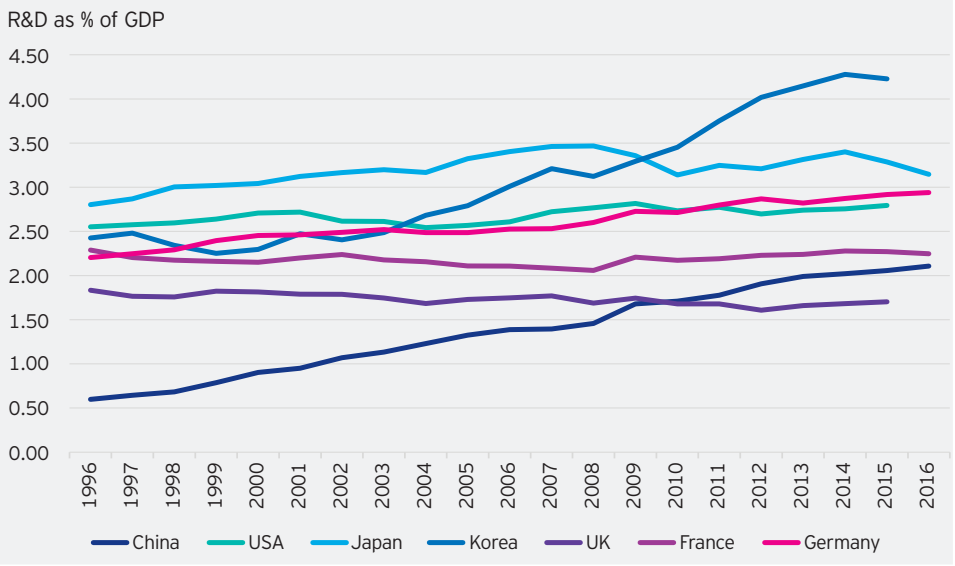
China's economy has achieved stellar growth over the past four decades, but is now beset with rising labor costs, dwindling added value and thinning margins. The economy today needs new drivers and strategies to maintain its competitiveness and growth trajectory. While its transition to a consumption-led growth model has been much talked about, another major aspect of the transition – technological innovation – has been thrown into sharp relief in recent years.

Investment risks
The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

China's expenditure on research and development has been lagging behind other major economies (figure 1), and Chinese officials came to realize that policy changes should be made so that start-ups can gain financing support.[1] This would bring research to market more quickly – key to China's technological advancement.

While investment into R&D has been an ongoing policy priority for the central government, the issue took on a greater urgency when China's domestically-grown internet companies have been venturing overseas to list publicly, with several of them now among the world's most valuable companies. Chinese policymakers therefore looked hard at what is it that New York's and Hong Kong's stock exchanges have done right to be able to attract Chinese tech firms. If Chinese firms achieved technological and innovative breakthroughs, it would only make sense to have them list domestically, as Chinese investors would be able to share in these successes. As such, Beijing unveiled in 2015 a strategic plan to move China's industries up the value chain over ten years.

Figure 1: China's R&D expenditure lags other major economies'



Source: Wind, Invesco Great Wall. Data as of April 23, 2019.

But roadblocks to its strategic vision soon emerged. Trade and political tensions with the US started to brew in 2017, and came to a head in April 2018 when American companies were blocked from selling parts to ZTE, a leading Chinese telecom equipment manufacturer. The question of technological self-sufficiency quickly became a national issue.

1. *Opinions of the State Council on Strengthening the Innovation-Driven Development Strategy and Further Boosting the In-Depth Development of Mass Entrepreneurship and Mass Innovation,* China's State Council, published on July 27, 2017, accessed on April 8, 2019.

Against this background, the announcement of the setting up of the Science and Technology Innovation Board on the Shanghai Stock Exchange (SSE) in November 2018 took on great significance, even more so when it was unveiled by Chinese President Xi Jinping. One of the aims for setting up the board is so that capital markets can be improved for China's "core technology innovation capabilities" (table 1).[2]

Preparations for the board's launch have since picked up pace, with a flurry of guidelines and proposed regulations being issued. The market has been equally excited, with 110 companies submitting applications to list.[3] The board is expected to launch as early as June 2019.

Table 1: Preferred types of companies

Strategic positioning	Company sectors
Engaged in cutting-edge tech	Next-generation IT
In economically-strategic sectors	Advanced equipment
Geared towards answering a national need	Advanced materials
Innovative	Advanced energy
Good public image	Green energy and environmental protection
	Foster synergies between the Internet, Big Data, cloud computing, AI, manufacturing

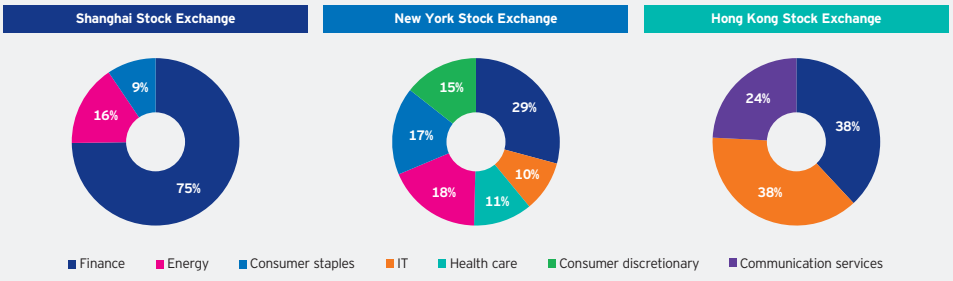
Source: CSRC, published Jan. 30, 2019, accessed on April 10, 2019.

Chinese tech companies find it hard to list in current market structure

Currently, listing requirements for Shanghai and Shenzhen's main boards are strict, especially for small companies. For example, applicants must report profits that aggregate to more than 30 million yuan over the last three years so that they can be listed on the A-share market.

Even though this approach is meant to protect Chinese investors from companies that are bleeding cash or are fly-by-night, it indirectly favors old-economy companies that have fixed assets and profits to raise capital in the A-share market (figure 2). Early-stage companies with strong growth prospects have found it difficult to gain access to these main boards due to their weak earnings and cash flows.

Figure 2: Tech firms not among Shanghai Stock Exchange's biggest listings
Comparing sectoral representation among 10 largest listings across three stock exchanges



Name	Market cap (CNY billions)	GICS sector
Industrial and Commercial Bank of China Limited	2,070.72	Finance
China Construction Bank Corporation	1,860.08	Finance
Ping An Insurance (Group) Company of China, Ltd.	1,573.93	Finance
Petrochina Company Limited	1,356.19	Energy
Agricultural Bank of China Limited	1,315.94	Finance
Kweichow Moutai Co.,Ltd.	1,223.54	Consumer staples
Bank of China Limited	1,145.17	Finance
China Merchants Bank Co., Ltd.	868.8237	Finance
China Life Insurance Company Limited	856.4206	Finance
China Petroleum & Chemical Corporation	687.6845	Energy

Name	Market cap (USD billions)	GICS sector
Alibaba Group Holding Ltd	477.273	Consumer discretionary
JPMorgan Chase & Co	379.9758	Finance
Johnson & Johnson	376.0352	Health care
Exxon Mobil Corp	339.9699	Energy
Visa Inc.	326.3116	Information technology
Berkshire Hathaway Inc.	297.489	Finance
Walmart Inc	295.1183	Consumer staples
Bank of America Corp	290.7609	Finance
Procter & Gamble Co.	267.087	Consumer staples
Royal Dutch Shell Plc	266.6128	Energy

Name	Market cap (HKD billions)	GICS sector
Microsoft Corp	4,597.69	Information technology
Tencent Holdings Ltd	3,693.93	Communication services
Industrial and Commercial Bank of China Limited	2,099.23	Finance
Intel Corp	1,790.80	Information technology
Cisco System, Inc.	1,760.81	Information technology
China Construction Bank Corporation	1,732.58	Finance
Ping An Insurance (Group) Company of China, Ltd.	1,726.57	Finance
China Mobile Limited	1,530.54	Communication services
HSBC Holdings PLC	1,391.97	Finance
Agricultural Bank of China Limited	1,266.94	Finance

Source: Wind Information, Invesco Great Wall. Data as of April 30, 2019.

2. *Rules on registering for initial public offering on the Science, Technology and Innovation Board,* CSRC, Jan. 30, 2019, accessed on April 10, 2019.
3. "Number of applicants that switched to Sci-Tech Innovation Board grows", China Securities Journal, May 20, 2019, accessed on May 23, 2019.

This then affects how much funding tech companies can get at an early stage, as venture capitalists are unlikely to find them attractive to invest in. Venture capital is crucial in incubating and accelerating the development of small- and medium-sized companies (SMEs), but if Chinese start-ups find it hard to list publicly, options for venture capitalists to recoup investments via the initial public offering (IPO) route will dwindle. As a result, venture capitalists may find them less appealing. This in turn could result in a vicious cycle for tech companies, as two major avenues for financing are cut off.

As early as in the early 2000s, several Chinese technology companies ventured overseas as listing requirements elsewhere were more flexible. Last year, Chinese companies raised US$64.2 billion globally – about a third of the global total – but less than a third of that was in Shanghai and Shenzhen.[4]

Innovating with the Science and Technology Innovation Board

China has made attempts to address some of the issues mentioned above by setting up bourses that mainly serve high-growth enterprises. There was ChiNext, which was set up in 2009 in Shenzhen, that was also touted as a "Nasdaq-styled board". The National Equities Exchange and Quotations, also known as the "New Third Board", was launched in early 2013 in Beijing to serve SMEs.

However, we view the upcoming Sci-Tech Innovation Board as the boldest set of reforms for China's equity market yet. The board sets itself apart by being a testing ground for how China can overhaul the way companies float and trade their shares on the stock market. These innovations have already been viewed by China's top leadership as crucial to capital market reforms in the country.[5]

Allowing pre-profit firms to list opens up funding avenues for startups

One of the board's major breakthroughs is that it will allow unprofitable companies, or those that have no revenue, to list. This is a major departure from other boards in China as they all require applicants to report positive profits in recent years. The Sci-Tech Innovation Board opens up a major source of funding for capital-seeking technology start-ups.

What does this mean for investors? We think shareholders that value growth will find such listings on the Sci-Tech Innovation Board attractive. This is especially so when a company derives much of its value in equity from being able to be disruptive or to advance core technologies – key attributes that coincide with what the SSE is looking for in candidates.

The proposal to remove the price-to-earnings (PE) ratio cap in IPO pricing is also garnering interest. The cap, currently at 23x, originally came from a Chinese Securities Regulatory Commission (CSRC) guidance in 2014, and has effectively deterred aggressively-priced IPOs. However, it also has resulted in high first-day gains for new listings, with many of them hitting the maximum allowable 44% rise – a ceiling mandated by regulators to prevent speculative buying and selling.[6]

It's worth remembering that these changes wouldn't be China's first attempt at lowering the threshold for IPO listings (table 2). It had done so with ChiNext board in Shenzhen where applicants to have generated profits of more than RMB 10 million for two consecutive years combined. However, ChiNext's approval-based IPO system still deterred potential applicants, which dented its popularity.

4. "Explainer: Why Shanghai's new Nasdaq-style tech board may be a game-changer", Reuters, Feb. 8, 2019, accessed on April 11, 2019.
5. "Xi Jinping's speech in full at the Shanghai Import Expo", Sina.com, Nov. 5, 2018, accessed on April 10, 2019.
6. "Proposal to remove first-day trading cap must move with the times" (in Chinese), Xinhuanet, Jan. 17, 2019, accessed on May 31, 2019.

Table 2: Summary of how Sci-Tech Innovation Board's rules differ from other main boards

	Sci-Tech Innovation Board	Main Board/SME	ChiNext
Public listing rules			
Entity qualifications	Companies that operate in line with positioning of board. Red chips, or Chinese companies incorporated outside of China, that meet requirements and regulations specified by CSRC and SSE. Board allows red chips to split assets and be listed back in the domestic market.	Companies that conduct IPO in China.	Companies that conduct IPO in China.
Difference in voting rights	Weighted voting rights allowed, and voting rights may not exceed 10 times that of common stocks. Stocks with special voting rights can be permanently converted to common stocks by the ratio of 1:1.	No related provision.	No related provision.
Requirements for IPO and listing	Issuer to meet at least one of the following conditions: 1. Estimated market value shall be no less than RMB1bn, net profit shall be positive for the last two financial years, accumulated net profit should be no less than RMB50m; or the estimated market value shall be no less than RMB1bn with a positive net profit for the most recent financial year and no less than RMB100m of operating income; 2. Estimated market value shall be no less than RMB1.5bn, operating income for most recent year is no less than RMB200m, R&D investment in the last three years accounts for no less than 15% of the operating income in last three years; 3. Estimated market value shall be no less than RMB2bn with operating income for the most recent year being no less than RMB300m, and cumulative net cash flow from operating activities in last three years being no less than RMB100m;	1. Net profit be positive for last three financial years, with aggregate amount exceeding RMB30m, and net profit have been calculated as the lower of the amounts before and after deducting non-recurring losses and profits; 2. Cumulative net cash flows from operating activities for last three financial years shall exceed RMB50m; or cumulative operating income for last three years shall exceed RMB300m; 3. Total stock capital before issuance is no less than RMB30m;	1. Be profitable in the last two consecutive years with accumulated net profit being no less than RMB10m; or the issuer shall be profitable in the most recent year with operating revenue of no less than RMB50m. Net profits shall be calculated based on the amount before or after deducting nonrecurring profits and losses, whichever is smaller. 2. Have net assets of no less than RMB20m at the end of the latest reporting period with no uncovered losses; 3. Have a total share capital of no less than RMB30m after IPO.

	4. Estimated market value be no less than RMB3bn, and operating income for most recent year be no less than RMB300m; 5. Estimated market value shall be no less than RMB4bn. Main business or products shall be approved by relevant state departments, have high growth potential, and shall have achieved initial results and obtained a certain amount of investment from well-known investment institutions.	4. Intangible assets (excluding land use rights, marine cultivation rights and mining rights, etc.) shall not exceed 20% of net assets at the end of latest financial period; 5. No loss has not been made up for in the latest financial period.	
Review procedure	SSE will review IPO application documents. If the application passes, SSE will submit review comments and application documents to CSRC for registration. CSRC may provide feedback and may send the application back to SSE for additional review. SSE will resubmit review comments to CSRC once application passes additional review, or SSE will announce termination of application if it does not pass the additional review.	CSRC reviews and approves issuer's IPO application.	CSRC reviews and approves issuer's IPO application in terms of the legitimacy and compliance of the application documents.
Industry review	During IPO review, SSE may consult Sci-Tech Innovation Consultancy Committee on whether issuer fits in Sci-Tech Innovation Board's positioning, as well as questions in IPO documents pertinent to issuer's business and technology.	Issuers in specific industries shall provide opinions from relevant administrative departments.	No related provision.
Information disclosure	SSE reviews information disclosed in IPO application documents in terms of adequacy, consistency, and comprehensibility so as to prompt issuers, their sponsors and securities service providers to present real, accurate and complete information, and improve the quality of information disclosed.	The stock exchange will review information disclosed in the application documents provided by the issuer and relevant parties with information disclosure obligations.	The stock exchange will review information disclosed in the application documents provided by the issuer and relevant parties with information disclosure obligations.

Issuance and underwriting	Securities companies, fund management companies, trust companies, finance companies, insurance companies, qualified foreign investors and private equity managers and other professional institutional investors (hereinafter collectively referred to as offline investors) should be inquired to determine the stock issue price of an IPO. Offline investors should be registered at and managed by Securities Association of China (SAC) and subject to its self-regulation. The issuer and lead underwriter can set the specific conditions of offline investors according to the provisions for related self-regulatory rules of SSE and SAC, and disclose in advance in the issuance announcement.	For IPO, the stock issue price can be determined by inquiry with offline investors, and can also be determined by direct pricing through independent negotiation between the issuer and lead underwriter and other legal and feasible ways. Public offerings with number of shares below 20m (inclusive) without old share transfer plan can determine the issue price by direct pricing. The issuer and lead underwriters should disclose the pricing method of the issuance in the prospectus and issuance announcement. Share pricing of the listed company should comply with the relevant provisions of CSRC on the issuance of securities by listed companies.	For IPO, the stock issue price can be determined by inquiry with offline investors, and can also be determined by direct pricing through independent negotiation between the issuer and lead underwriter and other legal and feasible ways. Public offerings with number of shares below 20m (inclusive) without old share transfer plan can determine the issue price by direct pricing. The issuer and lead underwriters should disclose the pricing method of the issuance in the prospectus and issuance announcement. Share pricing of the listed company should comply with the relevant provisions of CSRC on the issuance of securities by listed companies.
Trading and delisting mechanism			
Price restriction	No limits on rises and falls for the first five trading days after IPO, but there is a 20% limit after that.	Rises and falls capped at 10%.	Rises and falls capped at 10%.
Mode of trading	Auction trading, block trading, and after-hours fixed price trading	Auction trading and block trading	Auction trading and block trading

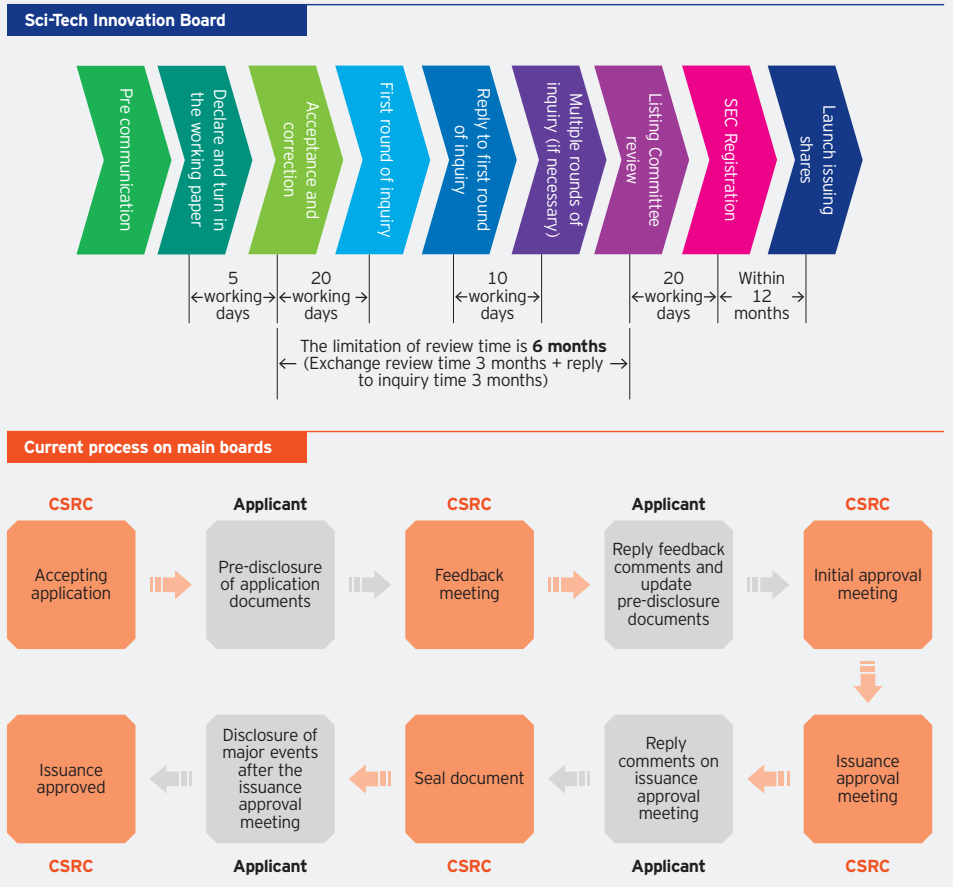
Source: HSBC Qianhai, published March 2019, accessed April 23, 2019.

Registration-based listing creates a more efficient stock market

This is why observers are scrutinizing the Sci-Tech Innovation Board's proposed registration-based listing system. Currently, all IPO applications – including those on the ChiNext – must obtain the CSRC's approval, which exposes the IPO listing system to political concerns and prolonged waiting time often measured not in months but years. For example, when indices correct, the CSRC – a government agency – tends to freeze approvals because new listings tend to suck liquidity away from the market. The registration-based listing system for the Sci-Tech Innovation Board replaces the need for applicants to obtain CSRC approval before getting listed. Instead, companies can decide when to list and for how much. The market then decides on applicants' worth.

We view this proposal is a significant step towards creating a more efficient and fair equity market in China. Not only will the market decide on a fair value for new listings, the application process for listings will also be sped up (figure 3). However, we remain circumspect on its execution. Even though the SSE will allow companies to list as long as they satisfy one of the five sets of financial indicators, we note that the CSRC still has veto power in listing approvals.

Figure 3: IPO application review for Sci-Tech Innovation Board is simpler than current process



Source: CSRC, SSE, CSDC, CICC Capital Markets, CICC Research. Data accessed on May 10, 2019.

Attracting overseas-listed tech giants back home

Beyond IPO listing requirements, the board will also welcome "red chips" – Chinese companies that are incorporated outside of China. These companies can list back home via issuing Chinese Depositary Receipts (CDRs), which are securities issued by a depositary in China that represent the rights and interests to these underlying shares of issuers outside of China. This way, red chips can still list in China without having to overhaul their overseas corporate structure. Should these companies list back on the mainland, Chinese investors can also have a share in these companies' gains.

This would not be the first time that China is proposing the CDR structure to woo overseas-listed companies back home. In March 2018, the CSRC announced a pilot CDR scheme that covers companies in advanced technology or "strategic and emerging industries".[7] But the plan has since been put on hold as negotiations with overseas-listed Chinese tech firms remain deadlocked and macroeconomic issues came to the fore. We wait for more details on the CDR scheme to assess its feasibility.

7. "China to pilot domestic listing, CDR issuance for innovative firms", Xinhua, March 30, 2018, accessed April 11, 2019.

Another Sci-Tech Innovation Board breakthrough is in weighted voting rights, or WVR. These rights are often in the form of dual-class share structures, where there are unequal voting rights on all or specific matters that are subject to shareholder approval. Technology companies like the WVR structure, as it allows founders and management to maintain control over the strategic direction of the company. This way, a young start-up can focus on the long term instead of generating immediate financial returns. It also is a bulwark against unwanted takeover attempts.

The openness of American bourses to WVRs was a major reason behind Chinese technology firms wanting to list there, and these firms' decision to list in the US prompted some soul-searching among exchanges in Asia, most notably in Hong Kong and Singapore where the two economies have been making a strong push to grow their high-tech sectors. The Sci-Tech Innovation Board's acceptance of WVR will allow Shanghai to compete better with Hong Kong and New York in terms of attracting technology companies. We expect that some of the overseas-listed Chinese tech companies will return to the mainland to list in the near term.

Concerns linger over execution

These proposals, while groundbreaking, also raise concerns over stock prices, the evolution of China's investment landscape, and the capabilities of China's brokerage and asset-management sectors in supporting the Sci-Tech Innovation Board's development.

Share prices may be volatile

A key concern would be how volatile share prices will be. Removing price limits in the first five trading days and increasing the price-limit trading band to 20% thereafter may cause stock prices to fluctuate greatly.

However, we think that the expected volatility will only be temporary. The above-mentioned proposals to overhaul the IPO mechanism, and also allowing margin financing and short selling of stocks on the Sci-Tech Innovation Board will allow the pricing of shares to be more market-oriented; supply and demand will be more balanced. This should be beneficial for China's capital markets in general.

Levels of sophistication a concern

This brings us to the next question on whether China's capital market is sophisticated enough to ensure that the Sci-Tech Innovation Board is a success. China's equity market remains sentiment-driven with retail investors making up the bulk of turnover. In 2017, individual investors accounted for 82% of the turnover on the Shanghai Stock Exchange.[8]

The dominance of retail investors can lead to big swings in prices for newly-listed shares. For retail investors, floats can be winning tickets to double-digit returns, as current controls on IPO pricing suppresses listing prices. With a 44% first-trading-day gain cap in place, and a lack of new names to invest in due to the low number of approved IPOs, retail investors are eager to invest in any new name that makes it to the board.

We think that limiting who can be a qualified Sci-Tech Innovation Board investor should mitigate some of these concerns. Contrary to the other main boards, the Sci-Tech Innovation Board is expected to have tighter rules on who can trade on it: individual investors must hold a minimum 500,000 yuan (US$74,500) and two years of trading experience in order to be eligible. Other requirements also include a two-year lockup period for sponsoring brokerages, and three years for senior management and core technology personnel. These rules underscore the Sci-Tech Innovation Board's preference for professional or institutional investors, which should lower the likelihood of sentiment-driven stock-price fluctuations happening.

8. "Fishing for Alpha? Take Your Investing New to China", Bloomberg, published March 8, 2019, accessed as at May 31, 2019.

Corporate governance is another concern. The board's listing framework favors smaller companies, but Chinese SMEs are not known to be rigorous in corporate governance. We believe that investment managers and brokers that forge deep relationships with SME management can understand these companies better and therefore more likely to avoid any governance risks that may arise.

There are also worries that a successful Sci-Tech Innovation Board would draw liquidity away from other boards. Some richly-valued tech companies on other boards could come under pressure as investors refocus on Sci-Tech Innovation Board stocks. We think that the Sci-Tech Innovation Board will in fact help uncover the true value of tech stocks in China, and thus be beneficial for similar stocks on other boards.

Regulatory risks may also affect the Sci-Tech Innovation Board's pace of development. Many of the above-mentioned proposals are not new, and some have even been tested out previously. But for a multitude of reasons, they have not persevered to become a permanent fixture in China's A-share landscape. For example, as illustrated above, authorities put attempts at CDR on hold after much fanfare. There may be a concern that short-term pain may result in reforms being reversed.

Brokerages and fund houses must step up
Brokerages will also have to get up to speed for the Sci-Tech Innovation Board's launch. The new IPO framework essentially eliminates government guidance in floating companies. Brokerages must now set IPO prices by calculating fair market value for a company that is pre-profit while measuring that against market sentiment and expectations. This may be a challenge for domestic agencies that have not had much experience in this area. For example, if the final valuation resulting from book building differs greatly from the preliminary appraisal value, the company may have to give up listing.

At the same time, fund managers would need more focused research platforms to look at the key sectors preferred by the boards. Investment processes would have to be improved upon in terms of calculating volatility and pricing. There may be a need to come up with new risk parameters, especially for Sci-Tech Innovation Board-only funds.

Sci-Tech Innovation Board a step in right direction
Overall, keeping in mind that these are still early days, we think that the proposals are a big step in the right direction for China's capital-market reforms and growth of its technology sector.

Even though the proposals made are specific to the Sci-Tech Innovation Board, several of them address concerns that have been raised before by the private sector. If successfully executed on the Sci-Tech Innovation Board, we anticipate that authorities will also want to have them be in place for other boards. This should set China's equity market – and capital markets as a whole – on a path towards being more market-oriented, and ultimately matching New York's and Hong Kong's bourses in their efficiency.

At the same time, we think that these proposals benefit China's technology sector and should inject a big boost of confidence into tech companies with regards to their prospects. For example, we anticipate that proposals such as allowing pre-profit companies to list will open up more financing options for start-ups, including making them more attractive to venture-capital investors; introducing WVRs should answer tech firms' concerns over shareholding rights and allow Chinese tech firms to focus more on long-term projects and research, rather than having to deal with investors' day-to-day concerns. This is even more so when China's equity market is overwhelmingly dominated by retail investors.

Conclusion

China has been committed to transforming its economy with technology advancement as one of its key drivers of growth. The central government has been keen on enabling this change, and we view the Sci-Tech Innovation Board as one of its key efforts at this.

At the same time, China's growing global economic clout means that it needs to have a well-functioning equity market to allow individual investors to partake in the economy's growth, while continuing to provide companies with capital to grow, which in turns ensure economic health and retain foreign investors' confidence. While these are still early days, the proposals we've seen so far are a good step in the right direction to ensure the continued development of its capital market.

Ahead of the board's launch, we reiterate that execution and faith in market dynamics are key to the success of the Sci-Tech Innovation Board, and China's capital markets. We remain cautiously optimistic of the potential that may arise with the board's launch.

Investment risks
The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

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