FROM BIG TO BIGGER AND MORE OPEN

China's Domestic Bond Market Development and Opening for a New Stage of Economic Development

Bloomberg L.P.

Executive summary

In a reflection of China's rapid financial market reform and opening, the domestic bond market has grown much bigger, more sophisticated, and more open to global investors over the past four decades. Continuing bond market development and opening will be conducive to China's economic transition to more sustainable, dynamic growth.

There is still huge potential for China's bond market. Using major advanced and emerging markets as a benchmark, we show that even as the second largest in the world, China's bond market can grow further in relation to the economy's size. Another key dimension of growth is foreign participation. We estimate that Chinese bonds held by foreign investors could increase by close to 16 times by 2025.

Such growth would be beneficial to China, and attractive to foreign investors. The Chinese bond market's imminent entry to the Bloomberg Global Aggregate Index will be an important milestone. The Chinese bond market's massive size,

diversification benefits, and higher returns are likely to draw foreign investors, which in turn can provide impetus for further market development and opening.

For the bond market to reach its potential, a number of policy measures should be taken, some in the near term. Our key recommendations include:

- Unify issuance and regulatory standards, and widen access for issuance and raise disclosure requirements for issuance;
- Work on mechanisms to improve credit ratings and corporate disclosure; speed up the process of allowing foreign credit rating agencies to enter the market;
- Widen the Bond Connect program, and relax repatriation rules;
- Expand hedging tools to manage foreign exchange risks;
- Begin to take steps to remove an implicit government guarantee of Chinese issuers to allow market pricing – key for normal market functioning.

I. Role of the bond market

A larger role for the bond market in financial intermediation, with more sophisticated instruments and greater foreign participation, is critical to sustaining China's growth in its new stage of development:

- This would help companies diversify their funding sources, and move the economy away from a bank-dominated funding model. Representing more stable funding, bonds can play a more important role than equities as a capital

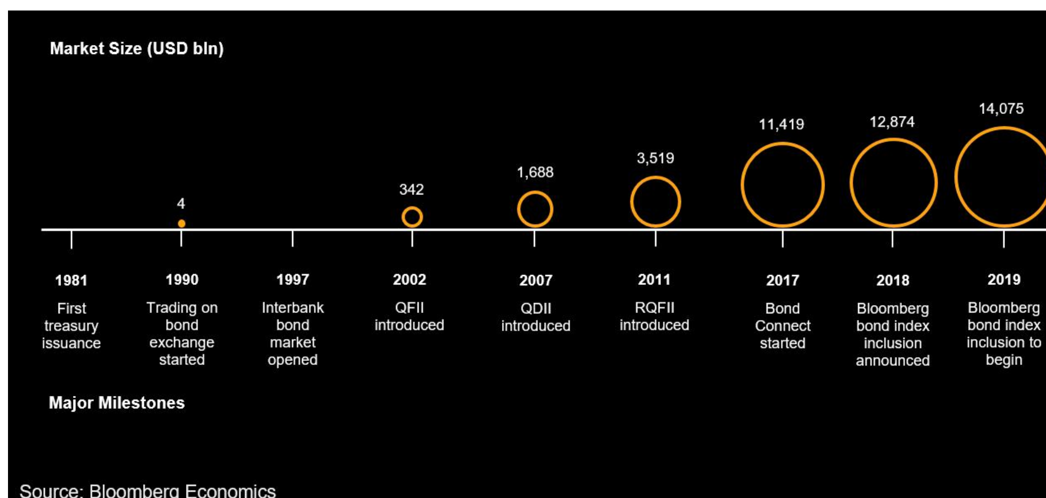
market funding source. Financial innovation in the bond market could be particularly important to improve private firms' access to funding and lower their funding costs.

- China has long articulated its goal to strengthen the role of the market in the economy. A broad investor base and trading in an open market would impose discipline on corporates, and facilitate good governance and efficient resource allocation.
- Carefully managed, continued opening of China's financial markets would speed progress on a number of fronts. Deeper and stronger linkages with international markets would further increase efficiency and promote diversification. Learning from international experience and spreading best practices could accelerate developments.
- Further developing the bond market would also yield benefits for macroeconomic management. A well-functioning bond market is conductive to transmitting monetary policy. Diversifying risks away from the banking system is one way of containing financial risks.

II. Growth of the Bond Market

China's bond market has expanded at a stellar rate. Since the first treasury issuance in 1981 and interbank bond market opening in 1997, the bond market has grown from $4 billion in the early 1990s to more than $12 trillion today, the third largest bond market in the world.

Figure1 Major Milestones in China's Bond Market Development



The market has also developed in many other dimensions within a relatively short time span:

- Products have grown considerably. After a decade of exclusively government bond issuance, the People's Bank of China began to issue notes in 1993. That was followed by corporate bonds and financial bonds issued by banks. More rapid innovation occurred after 2005 with the emergence of a wider variety of instruments, particularly credit products.

- The bond market has evolved from distributing treasuries through administrative means to a market with a fully-fledged structure. Bond trading in the exchange began in 1990. The interbank market, which did not appear until the late 1990s, became the dominant form of bond trading, accounting for more than 90% of the market share.

- Different market segments, including debt, interbank borrowing, repo and derivatives markets, have formed over time.

China's bond market opening began in the last 15 years.

- International organizations began to issue yuan bonds in China in 2005, referred to as Panda bonds. Issuance of yuan bonds overseas -- known as Dim Sum bonds -- began in 2007.

- QFII and RQFII: The Qualified Foreign Institutional Investors scheme started in 2002, allowing overseas investors to access China's onshore bonds using the dollar. It was later broadened to yuan investment, known as the Renminbi Qualified Foreign Investors Investment Scheme.

- In 2010, foreign central banks and a few other approved foreign financial institutions were allowed into the interbank bond market – in a pilot scheme known as the CIBM Direct. The scheme was broadened to cover more types of foreign institutions, and regulations were loosened in 2015.

- Bond Connect: This program, launched in 2017, allows international investors to trade bonds directly in the interbank market on the China Foreign Exchange Trading System (CFETS).

- Foreign central banks, sovereign wealth funds, and a few international organizations were allowed direct access in 2015 to the interbank market, which accounts for more than 90% of China's bond market. Subsequently, foreign institutional investors have been given access.

- Technical measures have also been introduced to facilitate international linkages. For example, the rules of entry for international rating agencies were relaxed in 2018. Bond trading under the CIBM Direct and Bond Connect programs can

now be undertaken through the Bloomberg platform which is linked with the China Foreign Exchange Trade System – the system used for China's onshore bond trading. The wide network of the Bloomberg platforum and this platform connectivity pave the way for more foreign entities to trade onshore.

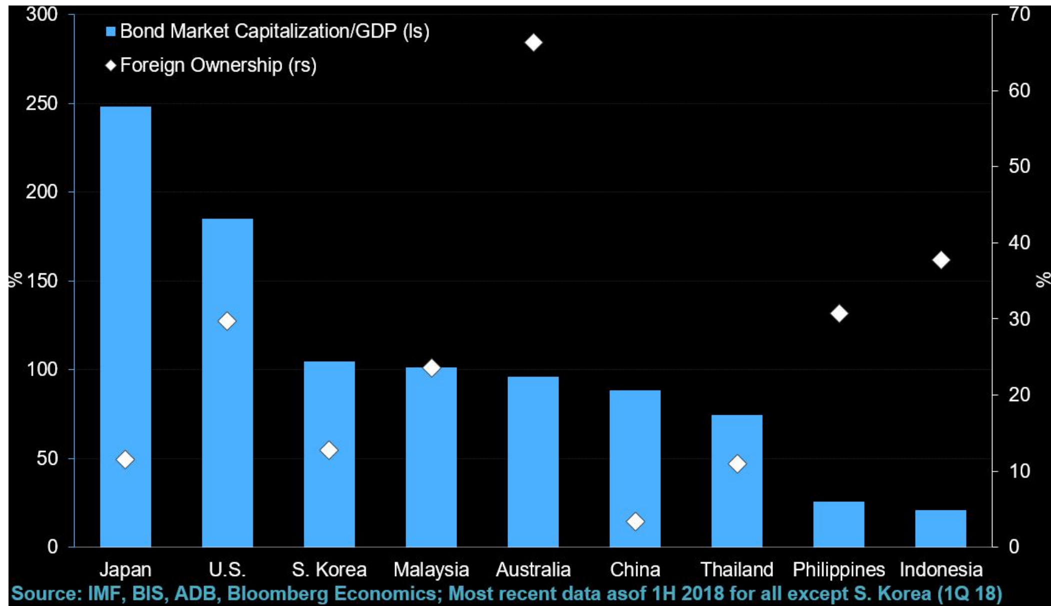
III. Reach for Full Potential

Despite the rapid growth and development, there is still much room for China's bond market to develop.

The Chinese bond market, while big in absolute terms, has some room to stretch in size considering China's economic scale. At almost 90% of GDP, it compares favorably with many economies in terms of bond market development. Nonetheless, this is much lower than 185% in the U.S., where the bond market plays a vital role in fundraising. Also, this is smaller than several emerging market economies such as South Korea and Malaysia.

Foreign participation is one dimension that China can extend significantly. Foreign ownership of China's bond market, at around 3%, has an even larger gap with comparator countries. Foreign investors own around two thirds of Australian bonds, and about 30% of U.S. bonds. The Japanese bond market's foreigner ownership is at the low end among advanced economies at just over 10%. Among emerging markets, the share of foreign ownership is high in Indonesia (40%) and the Philippines (31%), and low in South Korea (12%) and Thailand (12%).

Figure2 Bond Market Size and Foreign Participation: International Comparison



The limited participation by foreign investors in China's bond market has resulted in a disconnect between China's global economic and financial weights: China is the second largest economy, accounting for about 16% of the global economy in 2018; China accounts for about 12% of global trade, the second largest trading bloc after Europe; yet China currently has zero weight in major global bond indexes.

This will be changed soon when China's government and policy bank bonds are added to the Bloomberg Global Aggregate Index over a 20-month period beginning in April 2019. Once fully phased in, China would carry a weight of 6% of the $54 trillion gauge. That would imply substantial inflows into China over time.

Greater financial market opening holds out the prospect of a win-win for China and international investors. As discussed earlier, for China, it would attract foreign capital, facilitate risk sharing, and accelerate learning from global best practices.

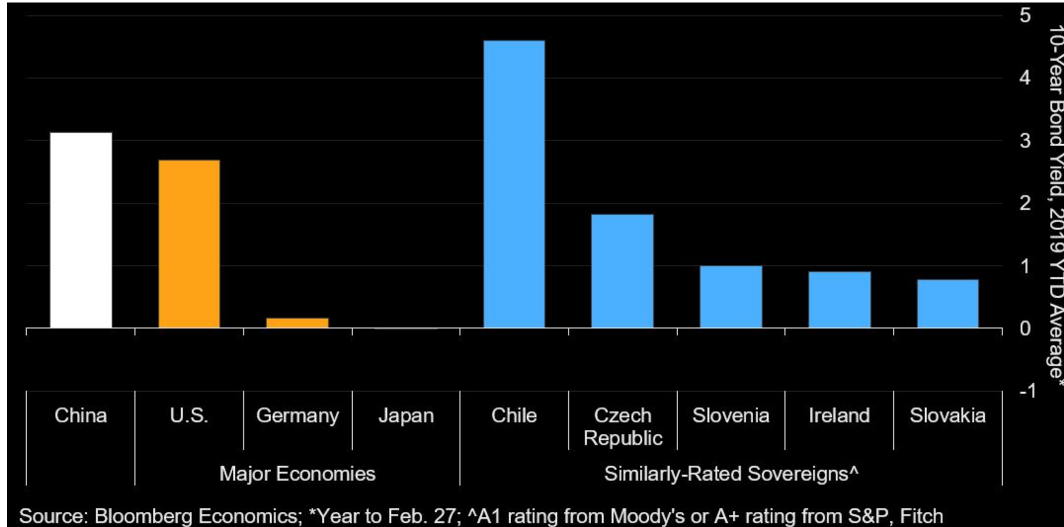
For foreign investors, the size of the Chinese bond market makes it too big to ignore. The market is also attractive in other important respects:

Figure3 Bond Market Correlation

- Low correlation of China's bond market with global bond markets offers diversification benefits. A Bank for International Settlements study by Shu et al. (2017) shows that movements in China's 10-year government bond yields are little influenced by those of the U.S. Treasuries.

- This is evident in our own analysis. For example, rolling correlation between changes in Chinese and U.S. 10-year Treasury yields, while rising, is much lower than that between the German and U.S. counterparts.

Figure4 Bond Yields: International Comparison

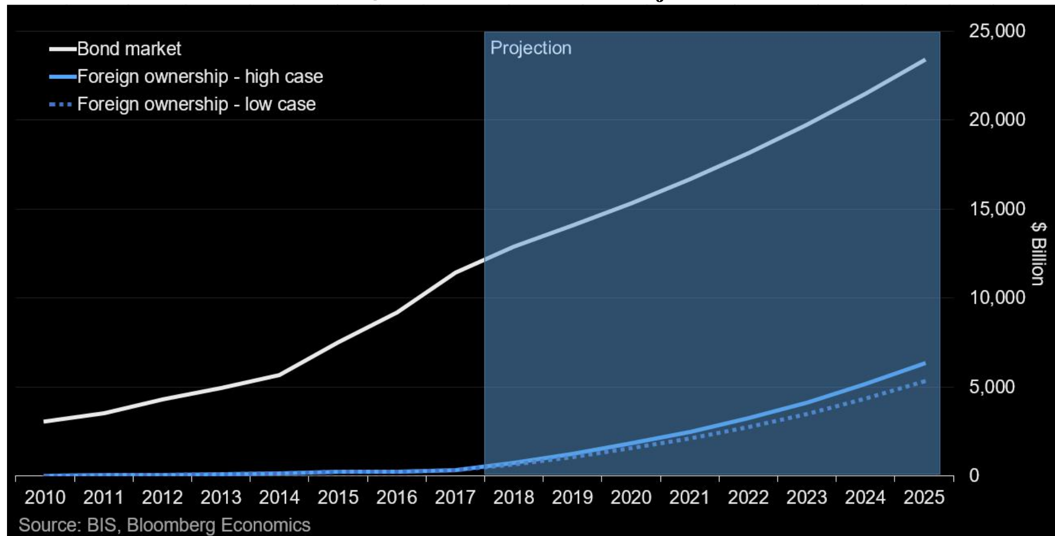


- China's 10-year treasury yields are higher than their counterparts in major developed markets such as the U.S., Germany and Japan.

- China's returns are also high among economies with similar credit ratings.

Of course, the experience of Asian neighbors that opened their markets too quickly in the 1990s, and paid a price in instability, is a reminder that a measured approach is required. Opening first to patient, long-term investors -- the approach China is following -- makes sense.

Figure5 Bond Market Projection



Former PBOC Governor Zhou Xiaochuan once forecast bond market capitalization would reach 100% of GDP. That is not far from China's current level of 89% of GDP. Based on the same assumptions on GDP growth, this would mean a $23.4 trillion bond market in 2025, twice the size in 2017 but still behind the U.S. bond market at today's value.

On foreign ownership, we assume a high-end case of 27% foreign ownership -- the average of advanced and emerging market economies, and a low-end case of 23% -- the average of emerging markets. In the high-end case, the value of Chinese bonds owned by foreign investors could grow almost 20-fold to $6.3 trillion. In the low case, it would expand to $5.3 trillion.

IV. Issues to Address

To reach that potential, there are a number of critical issues to address.

Multiple Regulators Leading to Regulatory Arbitrage

The corporate bond market is regulated by three agencies in China. The National Development and Reform Committee approves the issuance by SOEs for longer-term bonds. The PBOC regulates the interbank markets, and the National Association of Financial Market Institutional Investors regulates the issuance of short-term commercial paper, commercial paper and medium-term notes in the market under the guidance of the PBOC. The China Securities Regulatory Commission regulates the exchange market, and corresponding bond issuance in the market.

Regulatory arbitrage arises due to some overlapping coverage among multiple regulators. For example, there are cases where a company that fails to obtain approval from one regulator might be able to secure approval for issuance from another regulator.

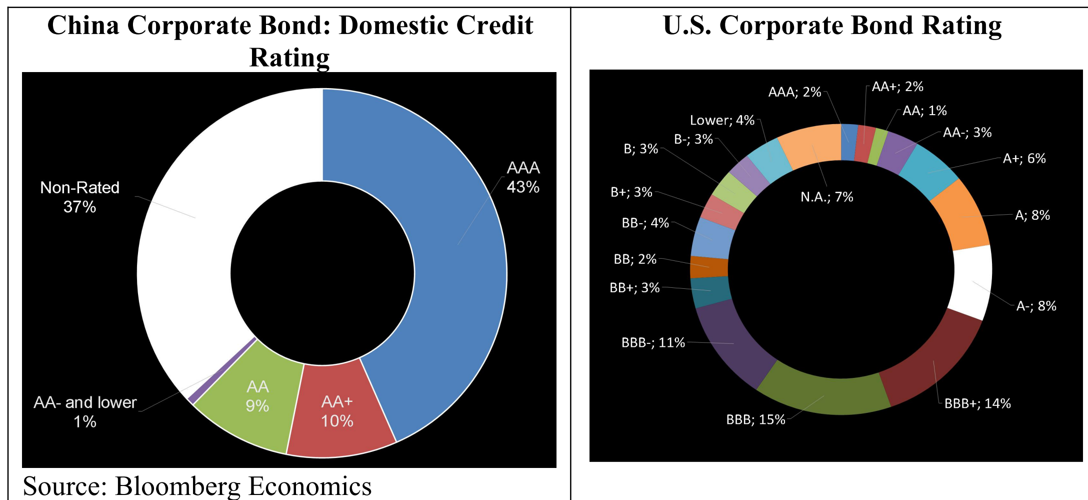
Disclosure and credit rating

A prominent issue in China's bond market is insufficient information and lack of transparency, which hinders informed decision-making of investors. The regularity and quality of information disclosure vary, and are often below the standards of those in mature markets.

Credit ratings, another aspect of disclosure, is one area that needs significant improvement.

- The credit ratings of China's corporate bonds are highly concentrated. Based on a Bloomberg composite rating index based on Chinese bonds' domestic ratings, most rated bonds fall into the AAA, AA+ and AA categories. Of the outstanding bonds, 43% were AAA rated at end-2018; AA+ and AA rated

bonds accounted for 10% and 9% respectively. AA- and lower-rated bonds were just 1%. What's more, a significant amount of bonds -- 37% of the outstanding volume -- were not rated.



China Corporate Bond: Domestic Credit Rating

U.S. Corporate Bond Rating

Source: Bloomberg Economics

As a comparison, the U.S. market has a much more dispersed rating distribution. According to a Bloomberg's composite rating index for the U.S., US bonds at and above AA- took up only 8.4% of the outstand bonds at end-2018, while BBB+, BBB and BBB- rated bonds accounted for 14%, 15% and 11% respectively. Unrated bonds amounted less than 7%.

- The criteria for China's corporate ratings are different from the ones widely accepted in the global bond market, a source of confusion for international investors. As a result, there are often large discrepancies between ratings in the domestic and international markets. For instance, an AAA-rated issuer in China's onshore market may be ranked in the range between A and BBB+ in the overseas market. This creates difficulty for offshore investors in measuring and managing credit risk in their bond portfolios.

Table1 Local Versus International Ratings for Selected Bond Issuers

	Local Rating	Global Rating
Wuhan Metro Group	AAA	A
Nanjing Yangzi State-owned Assets Investment Group	AAA	BBB+ to A-
Tianjin Infrastructure Construction & Investment Group	AAA- or AAA	BBB+ to A
Anhui Provincial Investment Group Holding	AA to AAA	A-
Shenzhen Expressway	AA to AAA	BBB- to BBB
Chongqing Nan'an Urban Construction & Development Group	AA+	BBB to BBB+
Zhuzhou City Construction Development Group	AA- to AA+	BBB-
Yangzhou Urban Construction State-owned Asset Holding Group	AA- to AA+	BBB- to BBB
Jiaxing City Investment & Development Group	A+ to AA+	BBB-

- There are concerns that local ratings may not reflect the bonds' credit risks.

At a fundamental level, these issues in credit ratings are caused by implicit government guarantees:

- The concentration of the ratings at the higher end is partly thanks to scanty defaults historically. According to Bloomberg, between 2015 and 2018, there were only 212 defaults, totaling 187 billion yuan. This is tiny in such a large market.

- The historically low default rate reflects the government's tendency to bail out or support distressed corporates. Both rating agencies and investors believe that most state-owned enterprises, and even some private corporates, are supported by the central and local governments. In these cases, the ratings are more a reflection of implicit government support, not the issuers' credit risk.

- The reliance on an explicit or implicit government guarantee is, to a large part, attributable to opacity in corporates' information disclosure.

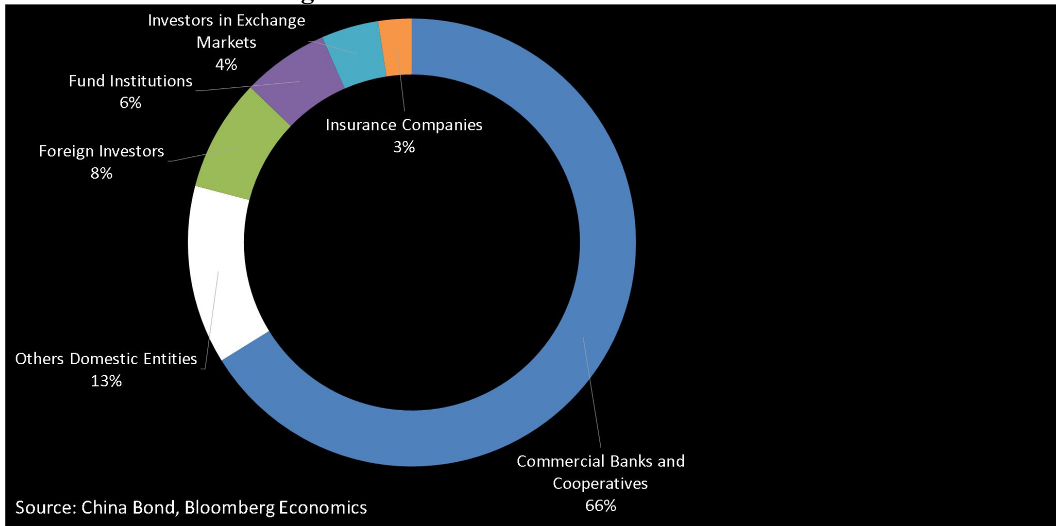
Uneven Liquidity Distribution in Government Bonds on Dominant Bank Holdings

Based on the data from China Bond, banks held almost two thirds of outstanding central government bonds at end-2018. Holdings by other investors accounted for far smaller shares. One prominent example is investment funds and insurance companies, whose combined holdings are just 9%. This is very low compared with that in advanced economies, where these long-term institutional investors are the most important players in the bond markets.

Encouragingly, foreign investors' share has increased rapidly in the past year, thanks to the Bond Connect, to 8% of CGB holdings.

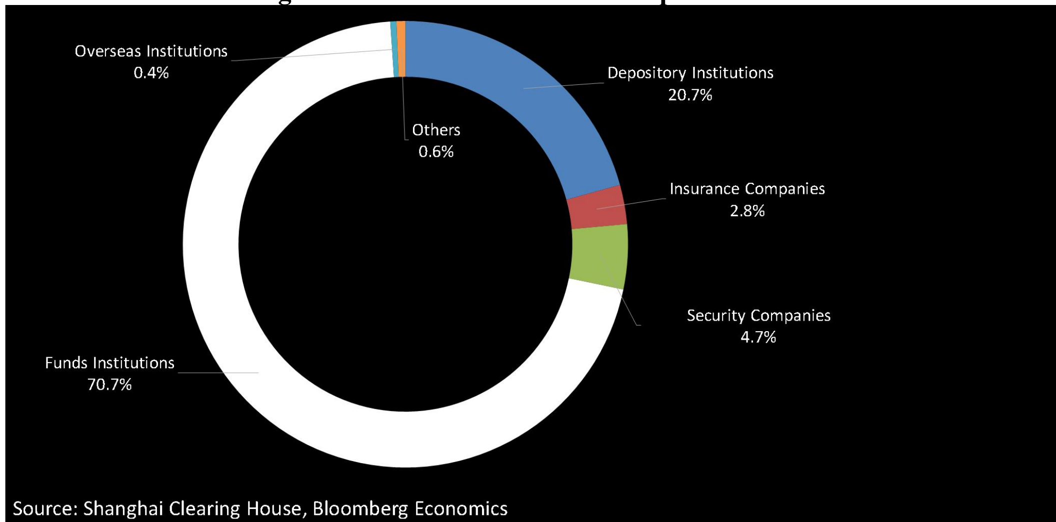
With a buy-and-hold tendency among banks, bank dominance in the investor landscape has led to a concentration of trading and liquidity in certain tenors. Trading in 1-year and 10-year bonds is fairly active. By comparison, there is limited trading in other tenors, resulting in illiquid market segments.

Figure6 Investor Structure in China's CGB



Lack of Long Term Funds Tilt Corporate Bonds to Short Tenors

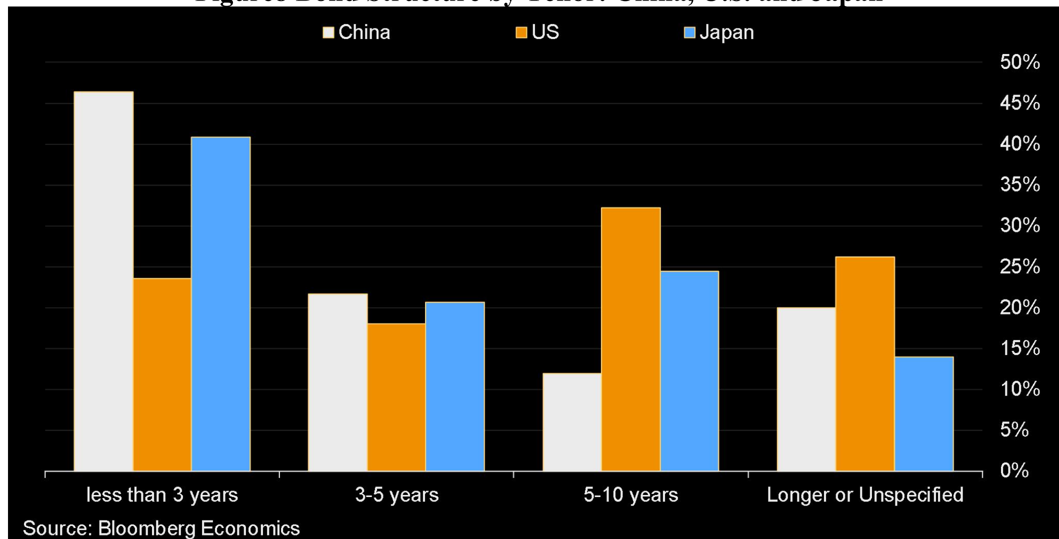
Figure7 Investor Structure in Corporate Bonds



There is another type of high concentration in corporate bond investors. According to data from the Shanghai Clearing House, around 70% of outstanding corporate bonds using this platform as the custodian (including short commercial paper, commercial papers and medium term notes) at end-2018 were held by fund

institutions, including mutual funds and banks' wealth management products. Banks – the second largest group of investors—accounted for one fifth of the market. The presence of overseas investors was negligible.

Figure8 Bond Structure by Tenor: China, U.S. and Japan



The concentrated investor structure has led to a strong tendency toward short tenor in China's corporate bond market, constraining the important function of providing long-term funding, especially for corporates' project investment. At end-2018, close to half of the outstanding bonds were to mature within three years. As a comparison, U.S. corporate bonds' distribution was much more even, with the 5-10-year tenor as the most common interval.

The short investment horizon of investment funds is attributable to a few major factors:

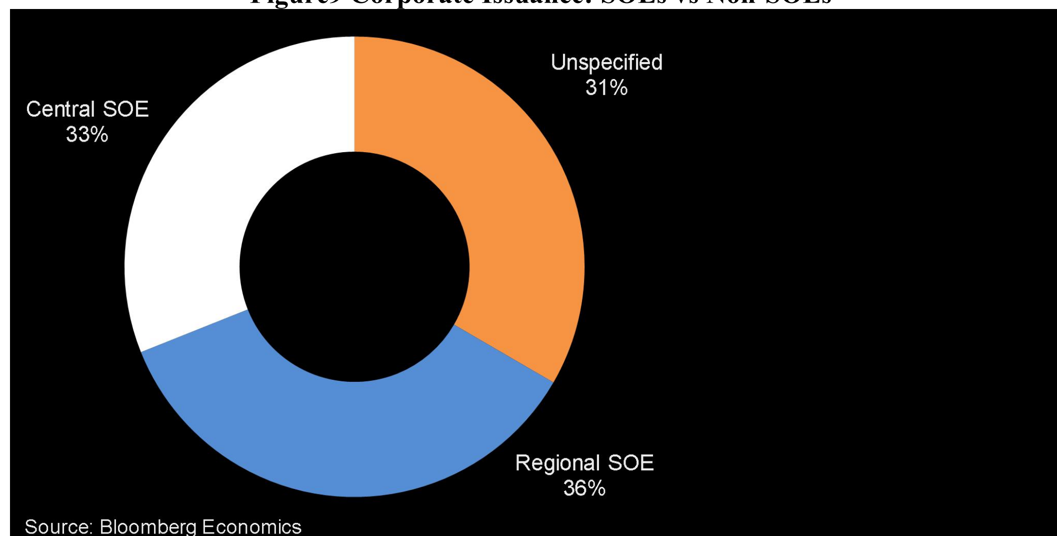
- Fund institutions align their investment horizon with the tenors of underlying products, which are typically short. For instance, as a major funding source, wealth management products issued by banks are typically less than one year.

- In China, a culture for long-term investment has yet to develop. The ultimate investors of investment funds – often corporates and individual investors – have a tendency to trade frequently, often acting on swings in the market.

- Insufficient information, as discussed earlier, makes assessment of the long-term credit outlook a great challenge, contributing to investors' bias toward the short end.

Fundraising for Private Firms Difficult

Figure9 Corporate Issuance: SOEs vs Non-SOEs



Private firms account for a small share of bond issuance. Bloomberg data show that 70% of outstanding corporate bonds in China's market are issued by central or regional state-owned enterprises. The actual share of private firms in the bond

market is even lower, as the remaining 31% "unspecified" bonds still contain a considerable share of government-related entities such as local government finance vehicles. As discussed in earlier sections, implicit guarantees and inadequate information disclosure are important reasons behind the SOE's dominance in the bond market. In a market of limited information, the perception of government support for SOEs puts private firms at a disadvantage.

V. Policy Agenda – Consistency Is the Key

To further develop China's bond market, the authorities can consider the following polices:

- It is important for the government to take concrete steps to unify issuance and regulatory standards across different regulators, as it has pledged.
- The authorities may consider removing the approval process for bond issuance over the longer term. This should lower the barrier for bond issuance and give more enterprises access to the bond market at lower costs. Such a measure would benefit private and smaller firms the most.
- An intermediate step could be to streamline issuance procedures. In streamlining, the hurdles for issuance could be lowered, while requirements on disclosure should be made more stringent. This would broaden the investment base. The market could get a chance to assess wider sets of companies and decide their creditworthiness.
- With the trend of market opening up and more defaults taking place, it is increasingly necessary to improve the accuracy of credit ratings and

information disclosure. The aim should be to better reflect issuers' credit profiles and have credit rating schemes compatible with international norms. The process of allowing in foreign rating agencies should be expedited.

- One critical measure for China's market development is to remove the implicit government guarantees, allowing the market to correctly price risk. Work should start toward this medium- to long-term goal.

- Diversification in market players is important for longer-term development. The authorities have made significant efforts in this regard in recent years. It is important to work on mechanisms to encourage participation of longer-term investors (e.g. pension funds).

- Widening of the Bond Connect program: products in the scheme can be widened to, for example, repos, interest rate swaps and treasury futures; in addition to current trading between overseas investors and market makers, direct trading between overseas investors can also be permitted. .

- Hedging tools could be expanded, reducing hedging costs in the foreign exchange market – crucial for foreign institutions' participation in China's financial markets.

For financial market opening to make continued progress, a consistent policy to bring down barriers is required. Foreign investors are often fearful of entering Chinese markets due to risks from policy reversals. Trading restrictions on equities and increased costs of yuan trading following financial market volatility in 2015, for example, have left a lasting memory. Rebuilding investor confidence will require patience and persistence.

**The essay is written by Bloomberg Chief Asia Economist Chang Shu, Bloomberg Economists David Qu and Justin Jimenez.*