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China: Financing the Green transformation

How green bonds can drive Beijing's sustainability ambition

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Key points

- China is set to undertake extensive investments to decarbonise its economy and energy system to achieve peak carbon emissions by 2030 and carbon neutrality by 2060
- The green bond market was launched in 2016 to mobilise private sector capital, in conjunction with public resources, to facilitate the upcoming green transformation
- China has been among the world's largest issuers of green bonds since 2016 and is the world's second largest market by total bonds outstanding
- The attractiveness of this market is not limited to its size, but also the diversity and quality of the investable green projects and bond issuers
- China has made significant strides to close the gap between local and international green bond standards. While there are still some remaining discrepancies, we believe these can be easily identified and rectified and should not stand as major hurdles for global investors to engage in this market

In the second piece of our three-part report[1], we discussed the micro and macroeconomic impacts of China's green transformation. While it is difficult to precisely quantify these impacts as China transitions to a carbon-free economy, we do know that a significant amount of investment will be needed to achieve the challenging goal of carbon neutrality by 2060. In this final piece, we look at the development of China's green bond market and its potential contribution to that goal, as well as the attractiveness of this market.

China has various green financing instruments

To facilitate the environmental clean-up in recent years and the upcoming decarbonisation, the Chinese government has strongly promoted "green financing", which the People's Bank of China (PBoC) defines as "financial services provided for economic activities that are supportive of environmental improvement, climate change mitigation and more efficient resource utilization".

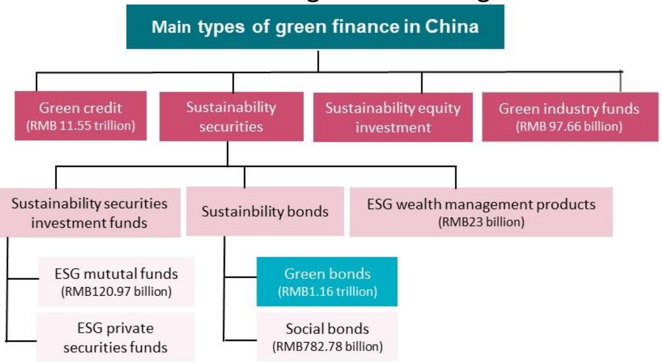
As discussed in our previous report, it is estimated that China will need to invest over RMB138tn over the coming decades to achieve its net zero commitment. This provides a strong demand for the development of sustainable financing, which has already grown rapidly in scale and diversity in recent

[1] Yao, A. and Shen, S., "China: Decarbonizing the economy", AXA IM Research, 8 April 2021

years. Exhibit 1 provides an overview of the instruments available and market size of this emerging segment of the financial system.

As one of the most popular green financing vehicles, the green bond market in China has seen astonishing growth in recent years. It is now large enough to be a significant consideration for global investors. However, questions remain over standards, regulation, transparency, and disclosure in this market.

Exhibit 1: A diverse set of green financing vehicles

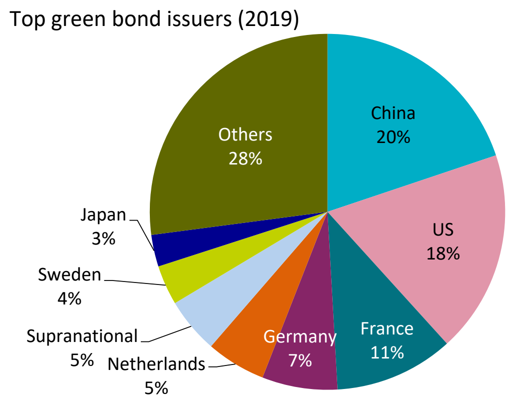


Source: China Social Investment Forum (SIF) and AXA IM Research, as of April 2021

The size of the green bond market is immense

The Chinese green bond market started in late 2015, and within a year it became the top issuer of green bonds globally. Since then, China has been constantly ranked among the largest bond issuers globally and is, by total bonds outstanding, the second largest market in the world (Exhibit 2).

Exhibit 2: China is the largest green bond issuer



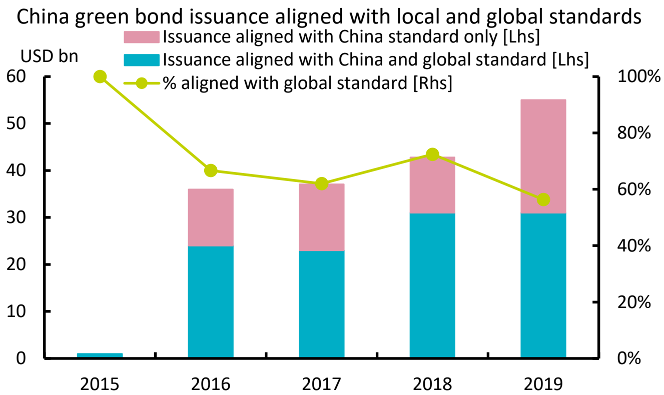
Source: Climate Bonds Initiative (CBI) and AXA IM Research

This rapid growth in the green bond market would not have been possible without strong official support, from the PBoC, National Development Regulatory Commissions (NDRC), China Securities Regulatory Commission (CSRC), and the Shanghai and Shenzhen Stock exchanges (SHEX and SZEX). In particular, the PBoC played a vital role in supporting the development and growth of the green bond market. In 2014, the PBoC and United Nations (UN) Environment Programme project Inquiry jointly arranged a green finance task force, consisting of 40 experts from ministries, banks, financial institutions and financial regulators. The main recommendation was to establish a well-functioning green bond market. One year later, a green finance committee was established and guidelines on issuing green bonds were formed which officially kick-started the green bond market in China.

In addition, local governments played an important role in boosting green bond issuance through a combination of policy and regulatory support, such as interest subsidy, cash rewards for third-party guarantors and a risk compensation mechanism. In the later years, the State Council set up pilot zones in five provinces – Guangdong, Guizhou, Jiangxi, Zhejiang and Xinjiang – to promote green finance reform and innovation. The provincial and municipal governments from the pilot programmes provided subsidies and established facilities such as information sharing platforms to encourage the use of proceeds for local green projects.

A total of 66 bonds worth RMB200bn were issued in 2016 following the first onshore bond sale, which was jointly issued by the Industrial Bank and Shanghai Pudong Development Bank at the start of that year. In the years that followed, the pace of green bond issuance has been rapid (Exhibit 3). Preliminary data suggests 2020 saw an exceptional drop in issuance that we attribute to a one-off impact from the pandemic. This saw China's issuance rank drop out of top three to the fourth place, for the first time since 2016. But as the COVID-19 situation improves, signs of a revival in issuance have already been visible in the opening months of 2021.

Exhibit 3: Pace of green bond market has been speedy



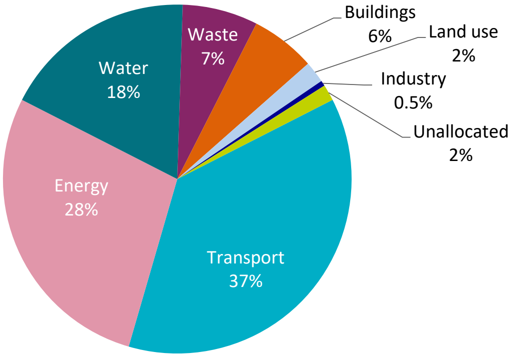
Source: CBI and, AXA IM Research, as of April 2021

The structure and rating

While being a latecomer, China's green bond market has grown rapidly, in not only size but diversity too (Exhibit 4). Transportation (mostly electric vehicles and railway projects) and energy (predominantly renewable fuels, such as wind and solar) accounted for over 60% of green bond issuance in 2019. Water conservation, waste management and building construction efficiency accounted for the vast majority of the rest. The Chinese green bond market composition is broadly similar to that of the global aggregate, but is more diverse than many smaller markets, which can be quite concentrated on clean energy projects.

Exhibit 4: China has a diverse range of green projects

Chinese allocation of proceeds (CBI definition)

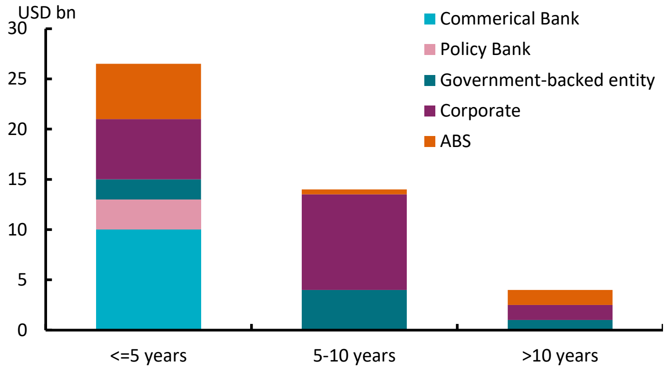


Source: CBI and AXA IM Research, as of April 2021

The maturity of Chinese green bonds is notably shorter than that of their developed market peers. In 2019, around 60% of the market was composed of bonds with terms of up to five years and these are primarily issued by financial corporates and public sector entities. Bonds with a tenor of five to ten years make up 33% of the total, and non-financial corporate issuers dominate this segment (Exhibit 5).

Exhibit 5: Most green bonds have maturity up to five years

China - Maturity and issuer of green bonds

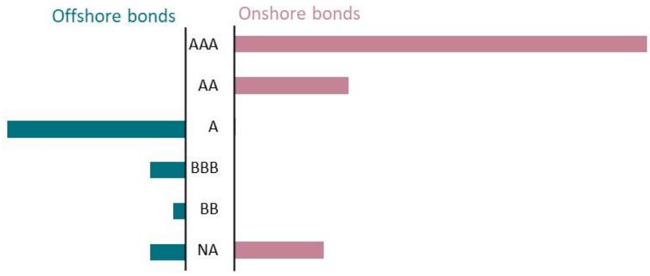


Source: CBI and AXA IM Research, as of April 2021

Moreover, ratings of Chinese green bonds are high (Exhibit 6). Apart from the 12% that are non-rated, all onshore green bonds have ratings at A or above. In fact, over 70% of the bonds are rated AAA by Chinese domestic rating agencies. Meanwhile, in the offshore market, the rating framework is more dispersed. Even though ratings are capped by China's sovereign credit at A+, the fact that a majority of bonds fall in the single-A cohort suggests high credit quality of offshore issuance[2]. Chinese green bonds are highly rated mainly because a large portion are issued by policy banks, large commercial banks and government-backed entities, helping to enhance the credit quality.

Exhibit 6: Chinese green bonds are highly rated

China - Credit rating of green bonds



Source: CBI and AXA IM Research, as of April 2021

Gaps remain between Chinese and global green bond definitions

For global investors, a key concern for investing in Chinese green bonds is exposure to potential 'greenwashing' – where bonds are not as green as claimed. In the main this comes down to the issue of definition and standards. The assessment of "greenness" of Chinese bonds is further complicated by the lack of a unified global standard on green bonds. In this paper, we use the Climate Bond Initiative (CBI) standards as a global yardstick to compare and contrast the Chinese definition of green and a commonly used international one.

The discrepancies between Chinese and CBI standards have narrowed significantly over time. However, some remain, largely due to the different emphasis of guidelines on promoting green financing activities. In general, international guidelines, such as the Climate Bonds Taxonomy and the European Union Sustainable Finance Taxonomy, pay more attention to climate change mitigation and align with the goals of the Paris Climate Agreement to limit global warming to below 2°C. For Chinese domestic green bonds, the emphasis tilts towards wider environmental benefits such as pollutant reduction, ecological protection, and resource conservation in addition to greenhouse gas (GHG) reduction.

There are three key areas of discrepancies between the Chinese and CBI green bond standards (Exhibit 7):

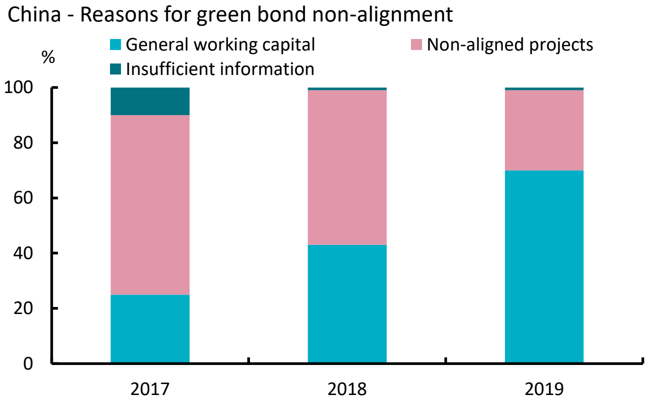
1. **Lack of information on the use of proceeds**. However, by 2019, only a small portion of Chinese green bonds had insufficient information as many issuers have already made significant improvement in providing transparency on proceeds allocation and management.

[2] According to Jiang, X. and Packer, F. "Credit rating of domestic and global agencies: what drives the differences in China and how are they priced?" BIS, June 2017. Domestic agencies put more emphasis on asset size as a positive factor. International agencies place more value on profitability and state ownership and more negative weights on leverage.

2. **Proceeds used for financing projects are not in line with the Climate Bonds Taxonomy.** This discrepancy has also narrowed significantly over the past years. Typical non-aligned projects include clean coal and hydropower projects. In the latest proposal of the PBoC's green catalogue, clean coal has been removed from the eligible green project category. While this will help to align Chinese and global standards going forward, this will not affect corporates that fall under the regulation of NDRC, SHEX and SZEX.[3]
3. **Proceeds allocated to working capital are not linked to green projects/assets.** The CBI standard requires that at least 95% of green bond proceeds go to green projects specified in the issuing document. Although bonds under the PBoC's supervision require the same standard, the threshold of some green bonds regulated by the NDRC is much lower at 50%.

Exhibit 7 shows that non-aligned projects have become less of a reason for remaining discrepancies. By 2019, around two-thirds of the remaining discrepancies (over $17bn worth of labelled green bonds) reflected bonds where more than 5% of the proceeds were earmarked for general working capital and not for the primary 'green' aspect.

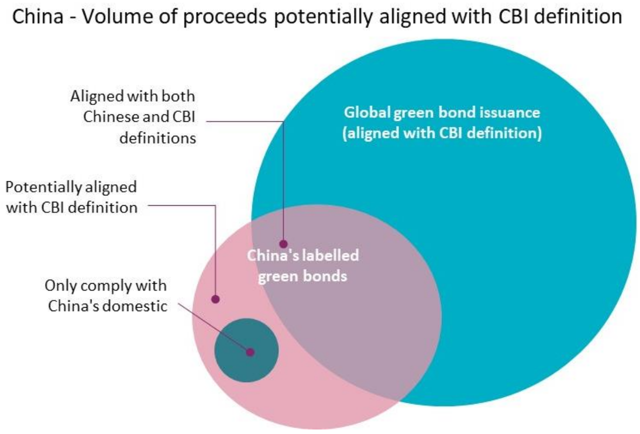
Exhibit 7: Discrepancies are narrowing over time



Source: CBI and AXA IM Research, as of April 2021

While the last category may seem problematic at first sight, the CBI's data-based forensic research (Exhibit 8) suggests that of the bonds excluded from the global definition of green, almost half can still be classified as green. These include bonds that otherwise meet international definitions were either "confused" by the non-aligned component of the proceeds allocations, or due to lack of transparency on the use of proceeds and/or impact reporting.

Exhibit 8: Some potential misclassification



Source: CBI and AXA IM Research, as of April 2021

Overall, despite the substantial work done by the Chinese regulators and issuers in terms of aligning with global definitions, the remaining differences in green standards still present an extra complexity for global investors. These are not insurmountable challenges and can be addressed by additional research of issuing documents and applying the right green bond filters. The extra costs may be small in comparison to the potential benefits and opportunities offered by what could be the world's largest and most diverse green bond market. However, further regulatory changes are needed to harmonise China's local standards with those of the developed world to entice more global investors to this fast-rising and soon-to-be-mainstream asset class.

[3] Moreover, electronic toll collections are considered eligible green projects for the Chinese green bond market but are not accepted by the CBI as they do not directly contribute to decarbonization of internal combustion engine vehicles.

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