

## **Growth & Opportunity: China's Green Bond Markets**

### **I: Introduction**

China's rise has been meteoric, but it has not been without cost. In recent years, recognition of its impacts on the environment have led the Chinese government to enact policies for a green transition across society and economy. Among these include the creation of a green bond market, part of China's effort to green its financial system. Seated in the broader context of China's needs for economic development, environmental sustainability, and the global effort to address climate change, this report will evaluate the performance of China's green bond market as part of efforts to green China's financial system.

This report will be split into the following sections. After this introduction, part II will explore the context of competing policy goals of development and sustainability. Part III will explore the green bond policy, part of efforts to green the financial system. Part IV will look at the development, impact, and future of the policy. Finally, a conclusion will provide a brief summary.

### **II: Competing priorities**

China's investment-export led model of development has enabled it to rapidly progress, but now China needs to shift towards domestic consumption and a less resource intensive economy (Chenghui et al., 2015). However, this requires continued economic growth and vast energy needs (IEA, 2021), which will rely on greenhouse gas (GHG) emission intensive sources for the foreseeable future (Dai et al., 2016). Resultantly, there is a tension between China's need to develop and the realities of climate change (IEA, 2021). Domestically, there are increasing environmental problems (Dai et al., 2016), and internationally, China is now the biggest net greenhouse gas (GHG) emitter, accounting for one third of global CO<sub>2</sub> emissions (IEA, 2021).

In response, China has committed to reach net-zero by 2060 (Harvey, 2020) and is increasingly prioritising (Chenghui et al., 2015) the transition to a sustainable economy (Dai et al., 2016); an 'ecological civilisation' (Gilbert & Zhou, 2017). Far reaching plans have been laid, promoting green technology and sustainability solutions (Mathews & Tan, 2014; Holzmann & Grunberg, 2021). Yet even as China invests vast sums into renewable energy (Timperley, 2018; O'Meara, 2020), it continues to build and finance fossil fuel capacity at scale (Davies, 2021; White & Hanfi Brogger, 2022).

China does not bare responsibility for historical GHG emissions (Steckel et al., 2017), but China's energy policies in the coming years will have significant impacts on its carbon neutrality goals and the global response to climate change (Lui, 2022). While China is now projected to reach peak emissions by 2025 rather than 2030, this suggests China could increase its climate ambitions (Lui, 2022). Yet by continuing to build and finance fossil fuel capacity, especially coal, China risks locking itself into a path dependency of high emissions energy infrastructure (Kalkuhl et al., 2012; Erickson et al., 2015) and stranded fossil fuel assets (Lui, 2022). The result: China's current climate goals are incompatible with keeping global temperature increases below 1.5°C (Lui, 2022), threatening climate catastrophe (White & Roston, 2022).

### III: China's green bond markets

As part of China's efforts to green its economy, in 2016 the People's Bank of China (PBOC) launched its *Guidelines for Establishing the Green Financial System* (Sandalow, 2022), quickly considered one of the most coordinated and comprehensive green finance plans in the world (Gilbert & Zhou, 2017). One of the reforms emerging from this was the *Green Bond Endorsed Project Catalogue*, providing a framework for the development of green bond markets (Sandalow, 2022), structuring the types of green projects eligible for financing by green bonds (Dai et al., 2016; PBOC, 2021). Available to be issued by development banks, governments, and corporations, and bought by international investors (Chenghui et al., 2015), among the first bonds issued were from the wind energy company Goldwind and the Agricultural Bank of China (Dai et al., 2016).

China needs to channel vast sums of capital into climate change mitigation and adaptation to reach its climate goals – between \$310-620bn each year (Sandalow, 2022), 10-15% from the public sector, the rest from the private sector (Gonsheng et al., 2015). Green bonds are crucial in generating these investment flows. They enable investors to participate in green finance (Long et al., 2021), and allow governments to tap into international debt capital markets (Dai et al., 2016; Chenghui et al., 2015). Although relatively new to form, international green bond markets are growing rapidly. Between 2013-20, the market grew from \$11bn issuances (Dai et al., 2016) to \$293.2bn (CBI, 2020).

### IV: Green bonds – development, impact & future

China's green bond market has grown at speed. Issuances rose from \$30.2bn in 2016 (Gilbert & Zhou, 2017) to \$109.4bn by 2021 (Long et al., 2021), making China the second biggest source of green bonds in the world (CBI, 2020) and a key area of future growth (Moody's, 2016). Although not yet raising the capital required for China's green transition, such results are impressive. Moreover, this growth is helping to shift lending behaviour in Chinese banks, offering new ways to raise capital (Choi et al., 2020), while reviewed projects are successfully reducing emissions and financing clean energy (Escalante et al., 2020). In 2021, 61% of proceeds went to renewable energy projects (Long et al., 2021) and the largest (internationally certified) bond issued was from the China Development Bank, \$3.1bn for wind power and solar power projects (Long et al., 2021).

A rapidly growing latecomer, China's green bond market stands out as a role model to other countries (Lin & Hong, 2022), but the markets' development trajectory has been distinct. In contrast to market-led Europe and America, in China top-down governance and state mechanisms (Long et al., 2021) have provided the required financial infrastructure and incentives for the markets' growth (Lin & Hong, 2022). Reflecting this, state-owned institutions play an important role in the Chinese market, contributing 38% of bond issuances in 2020 (CBI, 2020). Going forward, the market needs consistent signals from government (CBI, 2020), not always an easy task, as Chinese technology firms recently found (Vishnoi & Mookerjee, 2021), and as the market matures, transitioning towards a market-oriented structure may become appropriate (Lin & Hong, 2022).

Although proving successful, the growth of the green bond market has not been without difficulty. To meet China's climate goals, the market needs to be effectively integrated into international markets, which in turn requires issued bonds to be harmonised with international standards of best practise – for example, having clear environmental benefits,

subject to robust verification and transparency processes (Dai et al., 2016). For China, this process has been an area of friction. Early on, while many bonds were fully aligned with international standards, many were not because they funded ‘clean coal’ projects (Sandalow, 2022; Dai et al., 2016). During the first half of 2019 alone, at least \$1bn of ‘green finance’ was provided to thirteen coal related projects (Stanway, 2019), while many issuances – as much as two-thirds in 2021 – have not been aligned with international standards (Isjawara & Ahmad, 2022), restricting investor appetite (Dai et al., 2016).

Crucially, market regulators have proved responsive. By 2021, a new green bond catalogue was published that removed fossil fuel categories, bringing the Chinese market much closer to international standards (CBI, 2020; Min, 2021), vital to encouraging international investors (Isjawara & Ahmad, 2022). Nonetheless, difficulties in alignment remain. China allows issuers to allocate up to 50% of proceeds to working capital, whereas international standards only allow 5% (Isjawara & Ahmad, 2022). Challenges remain in information disclosure, external review and transparency processes (Long et al., 2021), with only 61% of issuances having any external review in 2020 (CBI, 2020). And clearer guidelines and incentives are needed to support growth (Escalante et al., 2020).

Without such improvements to better harmonise the Chinese market with international standards, China risks hampering the development of its green bond market before reaching full potential (Long et al., 2021; Escalante et al., 2020; CBI, 2020). Nonetheless, it is important to recognise that China’s bond market is new and its bond standards are likely to continue evolving (Sandalow, 2022). This leaves space for green bond markets to become the source of international capital China’s green transition requires.

#### **IV: Conclusion**

The development of green bond markets in China, part of the broader effort to green the financial system, could play an important role in China’s green transition. Although not without its challenges, the market is new and the growth trajectory is positive, providing an important role model for others looking to finance their own green transition. Nonetheless, the context of this growing market must be considered. Although China does not bare the burden of historical GHG emissions, ongoing efforts to build and finance fossil fuels in China, particularly coal, is a threat to global efforts to avert climate crisis. There is a desperate need for fresh political leadership. The question remains as to whether any country, including China, can prioritise those issues that threaten human civilisation itself, above the short-term nationalistic thinking that has brought the world to this point.

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