



Norbert Ling ESG Credit Portfolio Manager

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The economic rise of China into first world standards has led to the most aggressive poverty reduction program globally but the environmental impact of economic growth is now increasingly scrutinized. Due to its relatively fast pace of GDP growth, China has been the largest emitter of carbon dioxide worldwide since 2008 while it has continued to deliver improved carbon intensity metrics within industrial activities. In 2019 for example, China emitted 10.17 billion metric tons of CO₂ representing almost 28% of global emissions.¹

Amidst this backdrop, China exhibits both significant ability and wiliness to play a meaningful role in climate change mitigation going forward. While it is the largest emitter of greenhouse gases in absolute terms, China is also undertaking the world's most ambitious decarbonization process. Home to the second-largest bond market in the world, China's ESG ambitions have far-reaching consequences for potential investment opportunities within the domestic fixed income landscape.

Why not moment?

There are several reasons why ESG-related fixed income in China is expected to gain further traction

1) China's climate goals are firmly supported by top leadership

The Chinese government has been increasing its sustainability targets for the last two decades. In the past five years however, environmental regulations and emissions standards have become stricter and combatting pollution has become a high-level priority in its new development model. China has also had a consistent track record of meeting its climate change targets over the past decade, by reducing carbon intensity per unit of GDP as well as increasing its percentage of non-fossil fuels and forest cover (see Table 1). Last September, President Xi Jinping announced his target for China to achieve peak carbon emissions by 2030 and carbon neutrality before 2060.² The People's Bank of China (PBoC) has stated that government funding alone will not be enough to reach these targets and the private sector will also have to mobilize funds into green investment.³ In the process, the investible universe of ESG-related debt is expected to grow further, both in absolute and relative terms (see Charts 1 and 2).

Our World in Data - CO2 emissions, https://ourworldindata.org/co2-emissions#co2-emissions-byregion

Statement by H.E. Xi Jinping President of the People's Republic of China At the General Debate of the 75th Session of The United Nations General Assembly, September 2020, https://www.fmprc.gov.cn/ mfa_eng/zxxx_662805/t1817098.shtml

^{3.} PBOC Announces Additional Measures on Climate, April 2021, https://www.regulationasia.com/pboc-governor-announces-additional-measures-on-climate/



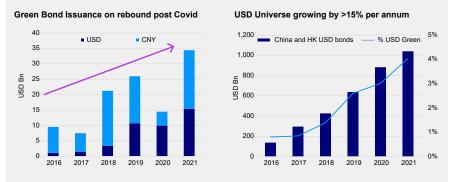
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Table 1 - China has an ambitious and consistent track record in meeting climate targets

KPIs	12th FYP (vs 2010)	Achievements	13th FYP (vs 2015)	Achievements	14th FYP (vs 2020)
Energy Consumption per Unit of GDP	-16.0%	-18.2%	-15.0%	-13.7%	-13.5%
Carbon Emissions per Unit of GDP	-17.0%	-20.0%	-18.0%	-18.8%	-18.0%
Non-Fossil Fuel Percentage		12.0%	15.0%	15.9%	20.0%
Forest Cover	21.7%	21.6%	23.0%	23.2%	24.1%

Source: CBI, Xinhua, CGTN, Oxford Institute for Energy Studies, Carbon Brief, Invesco as of March 2021

Chart 1 and 2 - Investible universe is growing at a fast pace



Source: Bloomberg, as of August 2021. Screening is based on USD currency of bonds from China and HK with a minimum amount issued of USD250mn, green bond tagging by Bloomberg.

2) ESG standards in China are converging with global standards at a fast pace

Over the last five years, China's ESG disclosures and reporting standards have been converging with global standards at a fast pace. China and the EU are also expected to finalize common classification standards¹ for green projects by the end of this year.⁴ In April, the PBoC, China Securities Regulatory Commission and the National Development and Reform Commission announced an updated "Green Bonds Endorsed Projects Catalogue" which came into effect on July 1.⁵ This catalogue, a revision on the 2015 version, covers an updated list of industries and projects eligible to be funded by green bonds which excludes the clean use of coal and other fossil energy.⁶

In the same month, the PBoC governor Yi Gang reiterated the central banks' plans to incorporate climate change factors into banks' stress tests.⁷ For context, the Bank of England and European Central Bank are only just beginning to conduct climate stress tests on banks under its supervision in 2021 and 2022 while the Federal Reserve has yet to commit to such plans.⁸

- The Green Bond Endorsed Project Catalogue 2021 Edition, May 2021, https://www.climatebonds.net/ market/country/china/green-bond-endorsed-project-catalogue
- 6. China, EU Set to Agree on Green Finance Definitions by Year-End, Official Says, June 2021, https://www.caixinglobal.com/2021-06-28/china-eu-set-to-agree-green-finance-definitions-byyear-end-officials-say-101732940.html
- 7. Ibid.
- 8. Chinese central bank governor backs push for climate risk disclosure, June 2021, https://www.ft.com/ content/12915a18-0136-4232-a0f6-33b6c6889bec

i. This is expected to involve a common taxonomy for environmentally sustainable investments in terms of types of projects and methodologies.

^{4.} Ibid.



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ESG reporting and data disclosures by corporates have also been improving over time and the majority of CSI300 A-share companies issued ESG reports as of mid-2020 (see Chart 3). In June, the CSRC published new rules for domestically listed companies to add ESG disclosures to their financial reports.⁹

Chart 3 - Percentage of A-share companies issuing ESG reports

All A-share companies	27%
CSI300 A-share companies	86%

Note: As of 15 June 2020; includes reports labelled as "sustainability", 'CSR' etc.

Source: SynTao Green Finance

3) China's ESG financing opportunities and needs are growing

As outlined in this earlier piece, the global value of assets under management at funds leveraging ESG data has almost doubled over the last four years to over USD40 trillion in 2020.¹⁰ As of late 2020, China in particular was expected to require RMB 3 to 4 trillion (USD462 billion to USD620 billion) in green investment annually by 2030.¹¹ As the largest green bond issuer in the region and globally, China is expected to play a leading role in green financing in the longer term, particularly considering the government's strong commitment to carbon neutrality and clean energy.

How can China play a material role in climate change mitigation?

Critics that question China's commitment to climate change mitigation may point to the fact that unlike developed markets such as the US and EU, the country has yet to reach peak absolute carbon emissions. This fails to account for the fact that the nation has been more efficient in terms of achieving its carbon intensity targets on a per capita basis.

In time, China's primary energy mix is expected to shift toward non-fossil fuels in a more meaningful way (see Chart 4). In absolute terms, China's renewable capacity growth has outpaced Europe and China now accounts for more than half of global capacity addition (see Chart 5 and 6). This pace of growth will further accelerate as China aims to increase non-fossil fuels from 15% to 85% by 2050.

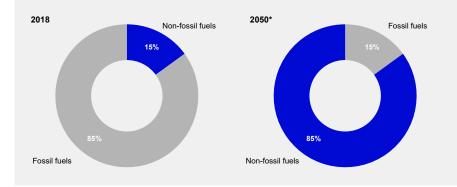


Chart 4: China's primary energy mix by source

*Note: 2050 data is indicative

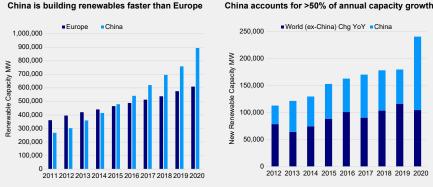
Sources: BP, Tsinghua University Institute of Climate Change and Sustainable Development, as of March 2021

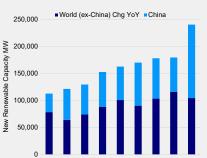
^{11.} China's Green Bond Issuance and Investment Opportunity Report, October 2020, https://www.climatebonds.net/files/reports/cbi_gfo_china_05b.pdf



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Chart 5 and 6: China is now the leader in renewables



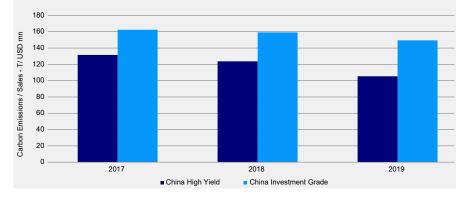


Source: Irena, Invesco as of August 2021

What does this mean for ESG investing within Chinese fixed income?

We believe investing in Chinese fixed income offers a unique opportunity of delivering material transition, alongside return-seeking opportunities. China's offshore fixed income universe has been exhibiting improving carbon intensity metrics over time (see Chart 7). As China continues its decarbonization process, we expect the growth in ESG-related fixed income universe to continue.

Chart 7: Improving carbon intensity metrics of offshore Chinese issuers



Source: Aladdin, MSCI, Invesco as of July 2021"

Currently, there is still a large degree of dispersion in ESG ratings for corporate debt as determined by the various ESG rating agencies. Therefore, leveraging a proprietary methodology based upon fundamental analysis incorporating risks and opportunities is key to forming an opinion on the ESG quality of companies and expected trends in their ESG performance. We believe that coordinated engagement as a platform is an integral part of ESG investing in China, helping to encourage improved disclosure and ambitious target setting on the journey towards net zero.

For ESG investors seeking yield, it could be worth having an allocation towards Chinese fixed income. Within the J.P. Morgan Asia Credit High Yield index, Chinese issuers contribute to 57% of the index yield while holding an index weight of just 38%. In the Bloomberg Barclays Global Aggregate index, China accounts for 40% of bonds that yield over 2%.12

We see opportunities in issuers that have business operations oriented to United Nations Sustainable Development Goals targets such as clean water and sanitation, affordable and clean energy and sustainable cities and communities.

ii. Methodology: Carbon emissions represents the company's most recently reported Scope 1+ Scope 2 greenhouse gas emissions normalized by sales in USD, which allows for comparison between companies of different sizes. Issuers are offshore Chinese firms included in the J.P. Morgan Asia Credit Index

12. Aladdin data as at July 30, 2021. Past performance is not a guide to future returns.



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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.

What's driving ESG investor interest in China fixed income?

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