

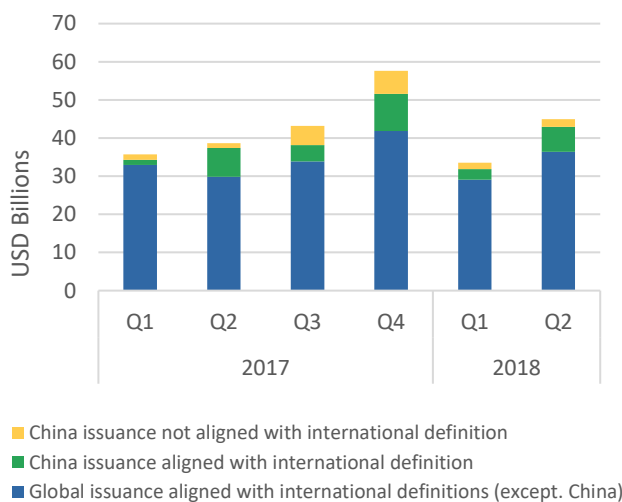
China Green Bond Market Mid-Year Report 2018

中国绿色债券市场 2018 半年报

JAN-JUNE 2018/2018 年 1 月至 6 月

Market overview

China vs. global green bond issuance



Global green bond issuance picked up pace in Q2, and total aligned issuance worldwide reached USD76.9bn for H1 2018. With USD9.3bn worth of green bonds aligned with international green bond definitions, China represents 12% of the global market over this period. Total issuance from China was USD13bn, but USD3.7bn is not aligned.

At a glance

Total H1 Chinese issuance:

USD 13.02bn/RMB 84.4bn

Onshore issuance:

USD 7.77bn/RMB 49.4bn

Offshore issuance:

USD 5.25bn/RMB 35bn

Issuance that meets international definitions:

USD 9.29bn/RMB 60.75bn

Certified Climate Bonds:

USD 2.57bn/RMB 17.33bn

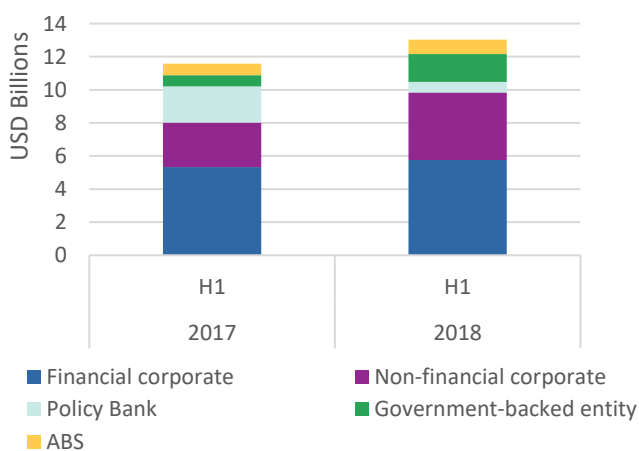
Largest issuer:

Industrial and Commercial Bank of China (London)

Largest issuing sector:

Renewable Energy

H1 2018 Chinese issuance: up 14% YOY



The H1 2018 green bond volume from Chinese issuers shows a 14% increase year on year, primarily driven by strong momentum from the private sector. Financial corporates' issuance accounts for 44%, and non-financial corporates contributed 32% to the H1 total.

With USD5.75bn issued, financial corporates remain the largest issuer type. Industrial and Commercial Bank of China and Bank of China top the list. A further 10 regional commercial banks contributed a total of USD1.9bn of green bond volume to this category. Financial leasing company, Huaneng Tiancheng further increased the diversity of issuer types with their latest issuance.

Similarly, non-financial corporate issuers feature companies from various industries, and include repeat issuers such as CGN Wind and Century Concord Wind Power as well as new issuers such as wind turbine manufacturer Envision Energy Overseas Capital.

Issuance from government backed entities – which includes bonds from the state-owned asset manager and investment company Beijing Capital – increased dramatically by 1.5 times YOY.

By contrast, issuance from policy banks was much lower: about a third of H1 2017 volumes. The only issuance this year came from Agricultural Development Bank of China, which came to market with a new tap of an existing bond.

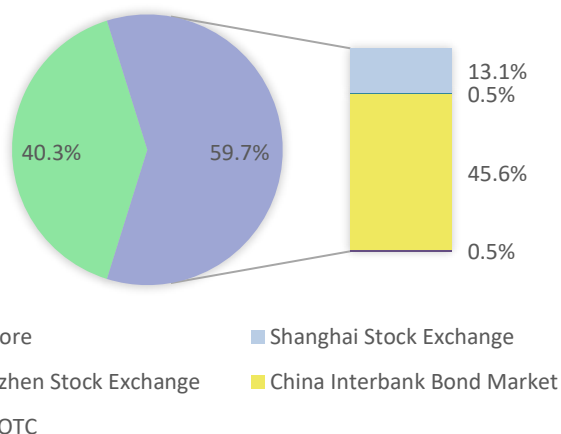
Frequent green ABS issuance in 2018 Q2

2018 Q2 witnessed the most frequent green ABS issuance with 5 deals totalling USD659m. This includes a securitisation from Kunshan Public Transport, which uses bus fare receivables as underlying collateral to finance the purchase of low carbon emission buses and fleet.

Issuer	Asset / ABS collateral	Amount (CNY)
Kunshan Public Transport	Bus fare receivables	280m
China Resources Leasing	Leasing agreements receivables	1.3bn
Harvest Capital/CECEP	Commercial real estate mortgage loan	1bn
Hengan Electrical Engineering	Hydropower station feed-in tariff receivables	400m
Nanjing Metro	Commercial properties receivables	1.2bn

Over 40% of H1 2018 volume was issued overseas

Over 40% of green bonds from China domiciled issuers was issued overseas in the first half of the year thanks to leading corporations and large commercial banks. ICBC (London) and ICBC (Asia) listed a total of USD2.3bn green bonds on the London Stock Exchange and Hong Kong Stock Exchange in June, making ICBC the largest offshore green bond issuer for 2018YTD.

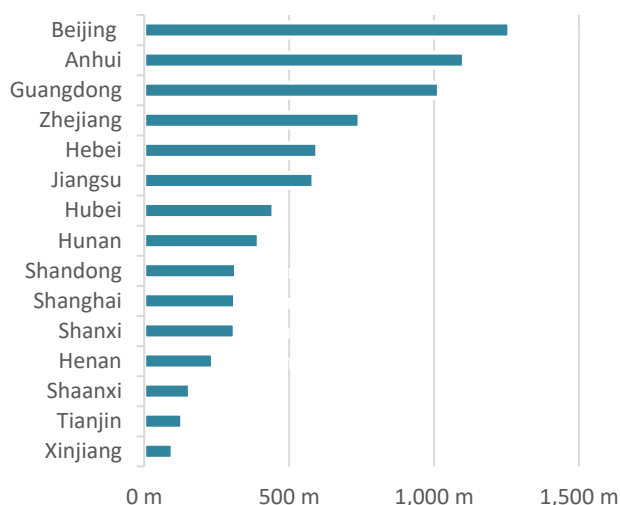


Domestic issuance continues to be dominated by placements through the interbank bond market: 76% of domestic issuance in H1 2018. The second largest venue was Shanghai Stock Exchange with a 22% market share domestically.

Hengan Electrical Engineering's debut green bond issued on the InterOTC market has also been included into our database. InterOTC operates as a system for the issuance and trading of private placement equity and bonds.

Although many private placement deals have relatively low levels of disclosure, we would include the bond in our database as long as the information on intended use of proceeds is disclosed and we can determine alignment with international green definitions.

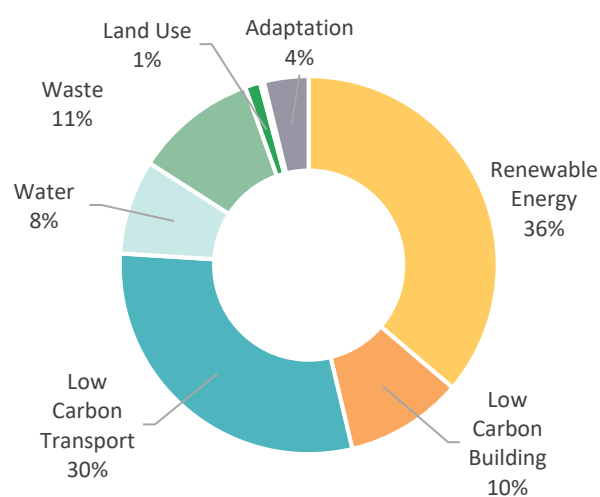
Diverse H1 2018 domestic green bond issuance



Geographically, the Chinese issuers of green bonds are spread unevenly across China with a heavier concentration in east China. Beijing, Anhui Province and Guangdong Province are in a leading position for green bonds issuance in H1 2018 with USD1.3bn, USD1.1bn and USD1.0bn issued respectively.

Guangdong is one of the five green finance pilot zones approved by the State Council. Starting from 2017, Huadu District took the lead in issuing under the "1+4" policy of green finance and the area will arrange a special fund of no less than RMB1bn for five consecutive years to support the development of green finance through instruments such as green bonds.

Use of proceeds (CBI definition)



Renewable energy is the largest category, with USD3.4bn green bond proceeds being allocated to it in H1 2018. Large allocations to the sector were made by Bank of China and ICBC's overseas green bond issuance. For example, ICBC (London)'s Certified Climate Bonds are backed by multiple onshore wind and solar farms across different provinces in China and in Pakistan as well as the Beatrice Offshore wind farm project in Scotland.

Non-financial corporate issuers Suntien Green Energy, Envision Energy and Ming Yang Smart Energy issued their debut green bonds to finance wind farms or for turbine manufacturing.

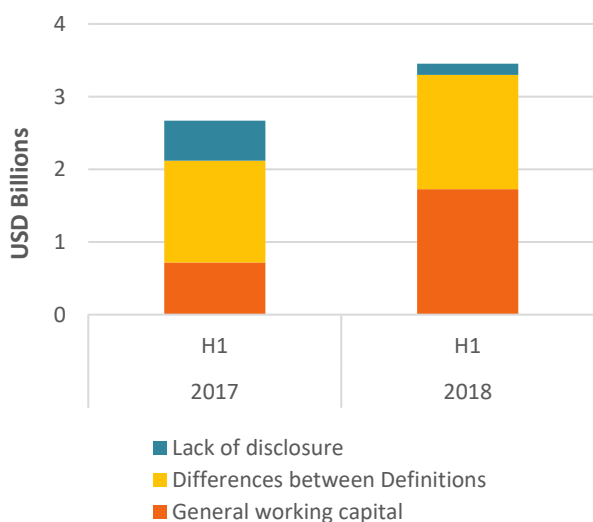
Allocations to **Low Carbon Transport** make up the second largest proportion in the mix. Tianjin Rail Transit brought the first offshore green bond issuance from a Chinese metro operator to the London Stock Exchange and Luxembourg Stock Exchange.

Urban mass transit operator Nanjing Metro, for example, issued a green ABS which is secured on rents and receivables from commercial properties along the metro lines and from shops and advertisements in stations, marking the first metro operator from mainland China to use a land value capture model to finance metro projects.

Building on Q1 momentum, green proceeds used for **Low Carbon Buildings** continued to grow in Q2. Harvest Capital Management and CECEP Group brought their second green CMBS with the same structure, where underlying asset is an office building owned by China Energy Conservation and Environmental Protection (CECEP) Group. The building received both the LEED Gold certificate and China Green Building Label (GBL) two-star certificate.

H1 2018 sees rise in exclusions due to high working capital allocations

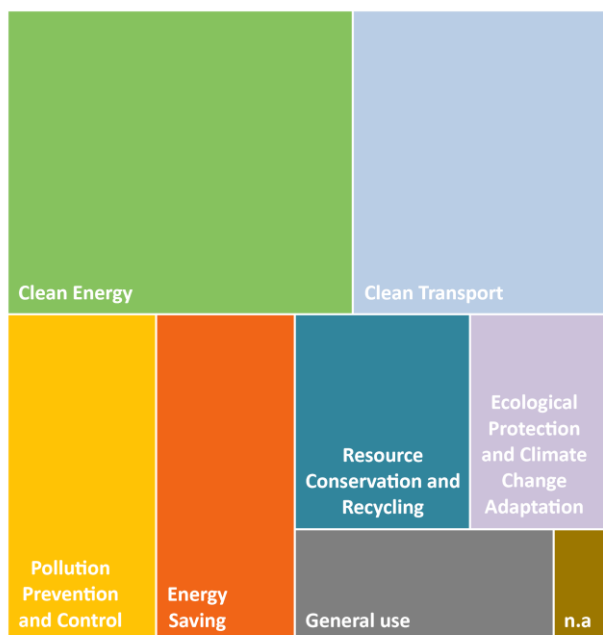
The proportion of green bonds that are not aligned with international green bond definitions has increased, making up 28% of the total green bond issuance from China in the first half of the year. On a very positive note, disclosure seems to be less of an issue compared to 2017, with fewer exclusions due to insufficient information on use of proceeds.



Nearly half the exclusions relate to deals, in which over 5% of the proceeds were allocated to general working capital. Although this is acceptable under the guidelines released by National Development and Reform Commission (NDRC), international definitions are tighter and seek to ensure that funds go towards capital asset investments, which contribute directly to reducing GHG emissions.

Another 45% of the excluded deals are cases where the proceeds are allocated to areas defined by China's local green bond guidelines but not aligned with international ones.

Use of proceeds (China's local definition)

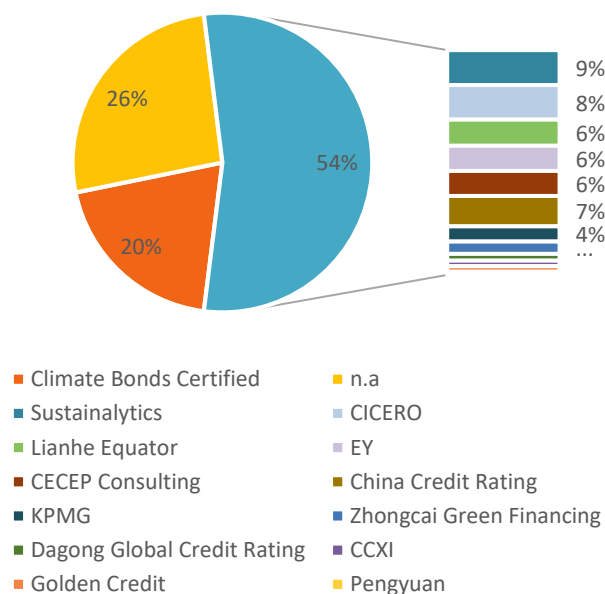


74% of H1 2018 issuance benefits from an external review

20% of H1 deals from Chinese issuers were Certified Climate Bonds, including ICBC London's USD1.6bn and Bank of China's USD1bn (Zhongcai Green Financing and EY provided verifications respectively).

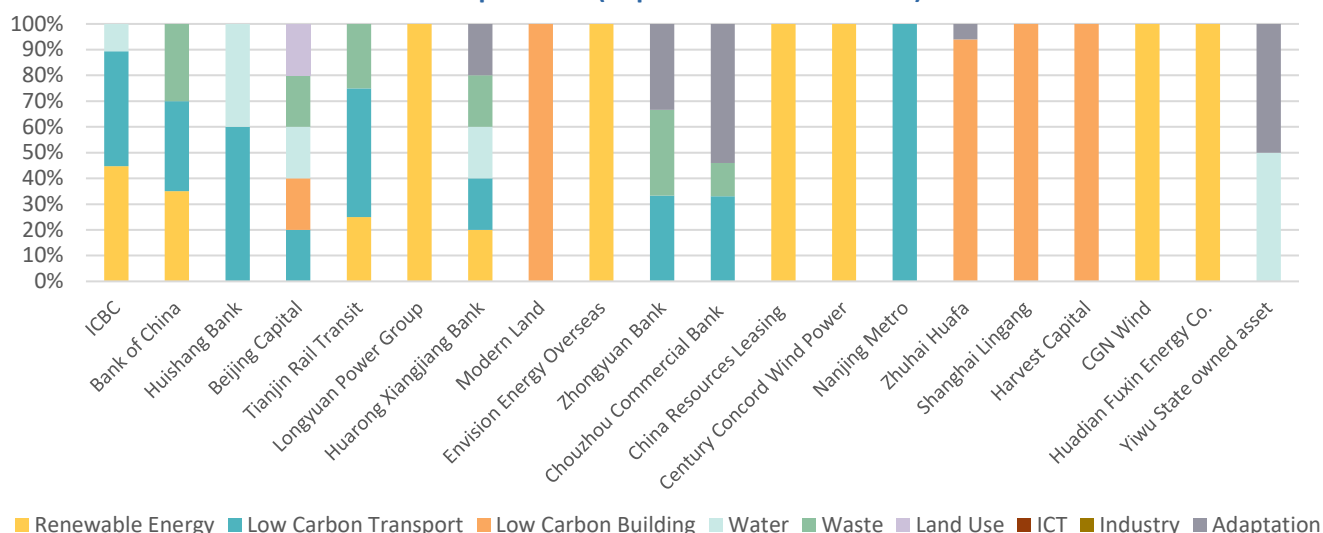
Another 54% benefit from a second party opinion or an assurance from a list of reviewers that keeps getting longer.

74% of H1 2018 issuance benefits from an external review



Suatainalytics and CICERO are among the top external reviewers primarily due to the offshore green bond deals. For example, Sustainalytics provided SPOs for Beijing Capital and Tianjin Rail Transit; CICERO – for Modern Land and ICBC (Asia). Lianhe Equator, EY and CECEP Consulting are the top reviewers in the domestic market.

Use of proceeds (Top 20 issuers in H1 2018)



Policy update

PBoC strengthens supervision of green bond allocations

In March, People's Bank of China (PBOC) issued a circular on strengthening the supervision of green bonds issued by financial institutions. Its focus is on issuers' operating status, authentication and progress in allocating the proceeds to green projects, compliance with screening and decision-making procedures, and impact reporting. The circular comes with regulations on information disclosure. They require regular reporting from green bond issuers on use of proceeds and prescribe templates for quarterly and annual reporting.

Hong Kong to launch Green Bond Issuance Programme

On 28 February, the Hong Kong SAR government announced in the fiscal budget its plan to launch a Green Bond Issuance Programme of up to HKD100bn. The sums borrowed will be credited to the Capital Works Reserve Fund to provide funding for green public works projects of the Government. A Green Bond Grant Scheme will also be introduced, under which green bond issuers using the Green Finance Certification Scheme, launched by the Hong Kong Quality Assurance Agency in January, will get up to HKD800,000 subsidy for each issuance.

PBoC to include green bonds and green loans as eligible MLF collateral

On 1 June, PBoC announced that it would expand the scope of the Medium Term Lending Facilitation (MLF) to include green bonds and green loans as eligible collateral. MLF operations already accept treasury bonds, central bank bills, bonds issued by China Development Bank and other policy banks, local government bonds, as well as corporate bonds with AAA credit rating as collateral. According to PBOC, the expansion of the scope of MLF collateral will help guide financial institutions to step up their support for the green economy.

Joint circular by eight ministries to support green supply chain innovation and pilot related green bond issuance

In late April, the Ministry of Commerce (MoC), the Ministry of Ecology and Environment (MoEE) and six other ministries jointly issued the "Notice on Carrying out Supply Chain Innovation and Application Pilots". It highlights the development of a green supply chain as a key task and aims to guide local enterprises in the implementation of the concept of green development. The ministries seek to facilitate quality improvements in the ecological environment.

MoC, Ministry of Industry and Information Technology, Ministry of Agriculture and Rural Affairs, MoEE and the Quality and Technology Supervision Bureau at all levels will strengthen business guidance on the circulation economy, industrial and agricultural supply chains, the greening and quality standards of supply chains. Ministries will also ramp up their support for the pilots through researching and introducing policy measures related to fiscal budgets, taxation, finance, land, etc.

The PBoC and the former China Banking Regulatory Commission (CBRC) at all levels intend to strengthen the guidance and supervision of the development of supply chain finance, research relevant support policies, ensure equality between all domestic and foreign-funded enterprises and institutions, and create a fair competitive market environment. Priority is given to supporting eligible pilot companies to issue corporate bonds, improving the quality of ex-ante and ex-post risk management, and promoting the healthy and stable development of supply chain finance.

News and events

Q1 2018

ADBC signs MoU to display green bonds on LGX

On 23 January, the Luxembourg Stock Exchange (LuxSE) signed a MoU with the Agricultural Development Bank of China (ADBC), the second largest policy bank in China, to set up an access scheme to display ADBC's green bonds and sustainability bonds, on the Luxembourg Green Exchange (LGX). The collaboration would help International investors gain access to detailed information in English about Chinese green bonds issued by ADBC, traded on the Chinese Interbank Market (CIBM) and accessible through the Bond Connect scheme. The information went live on 9 March.

2nd meeting of China-UK Green Finance Taskforce

The second meeting of China-UK Green Finance Taskforce took place in London on 19 March. It was co-hosted by the City of London Corporation Green Finance Initiative and Green Finance Committee of China Society for Finance and Banking. Featured topics included promoting green asset securitisation in both countries, Greening the Belt and Road Initiative, analysing the correlation between ESG and financial performance, as well as the launch of a joint pilot programme on implementing the TCFD recommendations for climate-related financial disclosures.

A strategic cooperation agreement was signed by both parties in Beijing on 26 March, officially launching the China-UK Green Finance Center to further promote green finance cooperation between the two countries. The Center will conduct research on related topics and organize seminars and other activities, as well as explore the development of green technology companies and financial technology companies in the medium term.

Leading Chinese Green Bond Issuers attended 2018 Climate Bonds Annual Conference in London

From 19 to 21 March, the 2018 Climate Bonds Annual Conference and the 3rd Annual Green Bond Pioneer Awards Presentation were held in London. Over 600 international market actors, leaders and policymakers from 55 nations participated in the events, to discuss and debate how to scale the global green bond market from billions to trillions. The conference featured China Green Bond Investor Forum on 19 March, connecting Chinese green bond issuers with international investors.

Participating Chinese Green Bond Issuers at the Forum included Industrial and Commercial Bank of China, Bank of China, Agricultural Development Bank of China, Industrial Bank, Shanghai Pudong Development Bank, Jiangsu Bank, Huzhou Bank, Modern Land (China) Co. Ltd. and GCL Group.

LuxSE and Shanghai Clearing House sign MoU to enhance visibility of Chinese green bonds

On 20 March, LuxSE and Shanghai Clearing House signed a MoU to facilitate access to Chinese green bonds for the international investor community. This will enhance international visibility and transparency of Chinese green bonds.

Q2 2018

Shanghai Stock Exchange (SSE) released its *Green Finance Vision and Action Plan 2018-2020*

On 25 April, SSE issued the "Shanghai Stock Exchange's Servicing Green Development and Promoting Green Finance Vision and Action Plan (2018-2020)". It points out that the SSE intends to support the development of green finance in five aspects, namely to promote the stock market, to actively develop green bonds, to strongly promote green investment, to deepen international cooperation in green finance and to strengthen green finance research and publicity. 14 specific measures are foreseen to achieve these goals.

Huzhou held a symposium to mark the first anniversary of green finance pilot zones

The "*Green Finance Reform and Innovation Pilot Zone Construction Symposium*" was held in Huzhou, Zhejiang on the eve of the first anniversary of the establishment of green finance pilot zones in five provinces.

On 14 June 2017, the State Council approved the overall plan for the development of green finance and innovation pilot zones in Guangdong, Guizhou, Jiangxi, Zhejiang and Xinjiang. Each pilot zone focuses on different aspects of green financing, including growing green bond issuance. Various pilot zones have announced experimental programs or to-do lists on developing green loans, green bonds and green insurance, and have committed to accelerating the construction of a diverse green financial system.

Over the past 12 months, the five provinces have actively explored and implemented the overall plan approved by the State Council in accordance with the local situation. That said, Deputy Governor of PBoC, Chen Yulu also stressed that the green financial reform pilot zones are still facing some problems and challenges during the development stage. There is an urgent need to forge ahead the laying of foundations. This includes the establishment of standards, information and related market infrastructure.

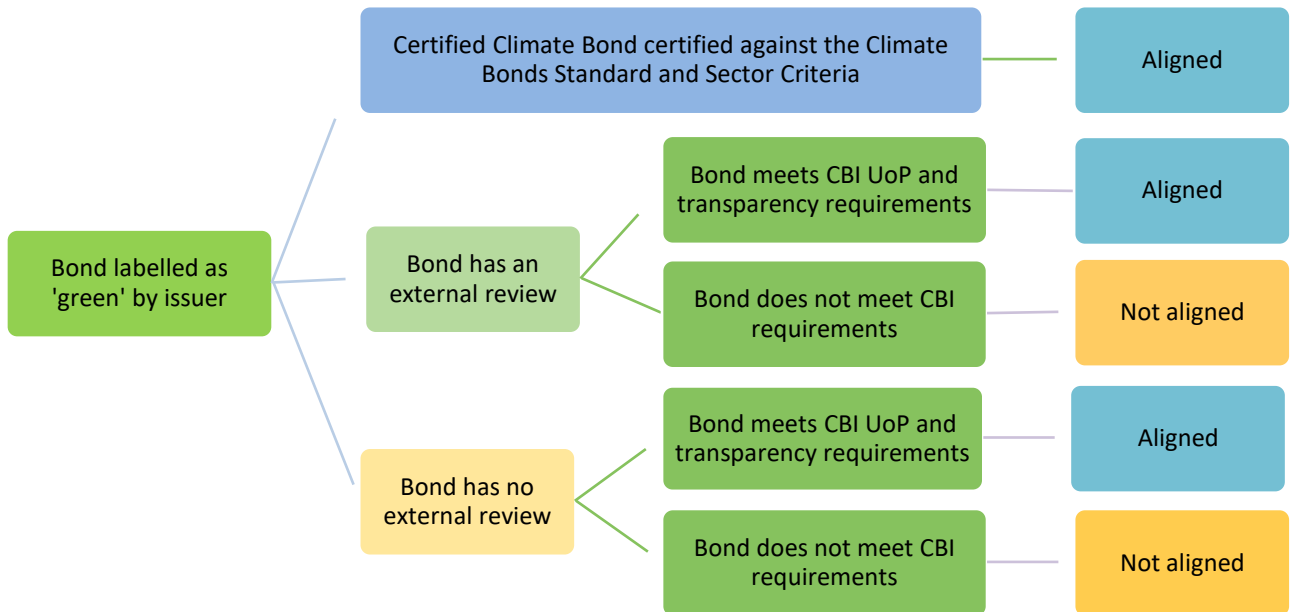
PBoC and HKMA co-hosted a seminar in Hong Kong to explore green finance opportunities

On 15 June, the Research Bureau of the People's Bank of China and the Hong Kong Monetary Authority co-hosted a joint seminar entitled "*Mainland and Hong Kong Green Finance Opportunities*" in Hong Kong. It brought together key policymakers and market experts to discuss green finance policy and market development in Mainland China and Hong Kong, and explore how Hong Kong can support and capture opportunities from the Central Government's national strategy on sustainable development.

Second Climate Bonds Certified Green Bond from ICBC

The Industrial and Commercial Bank of China - London branch (ICBC London) has listed a USD1.58bn equivalent green bond on the London Stock Exchange International Securities Market (ISM) on the 15th of June. The LSEG announced that the listing, part of ICBC's USD10bn MTN programme, is the largest ever green bond listing on the London Stock Exchange and the first Chinese issuance on ISM.

Climate Bonds China green bond database assessment methodology



The Climate Bonds Initiative screens self-labelled green bonds for inclusion in the CBI Green Bond Database.

Step 1: Identify green-themed, labelled bonds

A green bond must be labelled as environmentally beneficial by the issuer. The most common label is 'green', but others such as solar, renewable energy, energy efficiency and sustainability are also eligible.

The label should appear in a public document such as press release or bond prospectus. Alternatively, the issuer can obtain a green bond assessment, evaluation or rating.

Step 2: Screen the projects or assets for alignment with the Climate Bonds Taxonomy

Each bond is reviewed based on the green credentials of the use of proceeds. This may be earmarked proceeds for asset-linked, senior secured or unsecured bonds, or underlying assets for an ABS. The key is that the asset is green.

At issuance, the issuer must declare the eligible assets or project categories. Common practice is issuers link the deal and green bond framework with the Green Bond Principles (GBP) or China's domestic green bond guidelines, such as those released by the PBoC or NDRC, and then obtain an external review to confirm compliance. However, compliance with GBP or Chinese regulators' guidelines does not automatically guarantee the inclusion in the CBI Green Bond Database. The GBP list and some of the green bond guidelines show high-level indicative assets, whereas the Climate Bonds Taxonomy and the database inclusion criteria are asset-specific and exclude certain categories such as fossil fuels and anything that extends the life of fossil fuel assets.

Step 3: Evaluate the use of proceeds

Climate Bonds' focus is climate change mitigation and adaptation. Only bonds which are expected to allocate at least 95% of proceeds to aligned green assets could be included in the CBI Green Bond Database. If more than 5% of the proceeds are used or expected to be used for funding operations or assets that do not align to the Climate Bonds Taxonomy, the bond will not be eligible for inclusion.

Climate Bonds Taxonomy

The Climate Bonds Taxonomy provides broad guidance for prospective green bond and climate bond issuers and investors. The aim of the taxonomy is to encourage common definitions across global markets, in a way that supports the growth of a cohesive thematic bond market. The Climate Bonds Taxonomy consists of eight categories:

- Energy
- Transport
- Buildings
- Water management
- Waste management & pollution control
- Nature-based assets, including land use, agriculture & forestry
- Industry & energy-intensive commercial
- Information technology & communications (ICT)

Low carbon technologies included under the taxonomy evolve over time as science progresses. The taxonomy diagram and more detailed information are available on the CBI website.

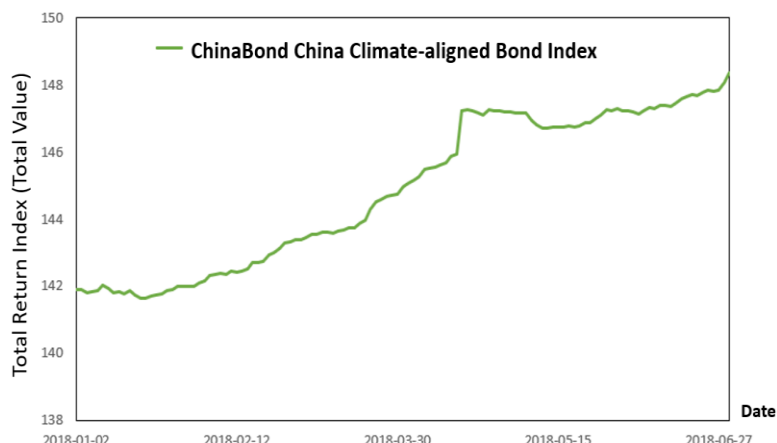
Exclusion overview: Climate Bonds publishes the reason for exclusion of bonds from the CBI database in its market blogs. The table below summarises the exclusion categories and provides examples of proceeds allocation that may lead to exclusion.

Exclusion category	Proceeds allocation examples
Not aligned with Climate Bonds Taxonomy	Clean coal, rail lines mainly transport fossil fuels
Over 5% allocated to funding operations	Operating cost, working capital, general corporate purposes
Insufficient information	No disclosure and limited information

China Climate-aligned Bond Index

ChinaBond China Climate-aligned Bond Index is the world's first climate related bond index, compiled in collaboration between China Central Depository & Clearing Co. Ltd, China Energy Conservation and Environmental Protection Consulting Co. Ltd (CECEP) and the Climate Bonds Initiative. The index identifies a broad list of bonds that are supporting low carbon and climate resilient projects as defined by the Climate Bonds Taxonomy and the China Green Bond Endorsed Project Catalogue. The index was released in September 2016.

As of 30 June 2018, the ChinaBond China Climate-Aligned Bond Index comprised 336 bonds amounting to RMB1.34 trillion, with average maturity of 4.11 years. The 1-year and YTD return rate of the index is 3.86%.



Total return for ChinaBond China Climate-aligned Bond Index

Total return index	1 Month	1 Year	3 Years	5 Years	H1 2018
ChinaBond China Climate-aligned Bond Index	0.76%	3.86%	13.66%	28.60%	4.59%

Top 10 constituent bonds in ChinaBond China Climate-aligned Bond Index

Short Code	Issuer	Market	Issuer Type	Weight of market value
1280219	China Railway	China Interbank	Government-backed entity	1.73%
1480174	China Railway	China Interbank	Government-backed entity	1.61%
1380241	China Railway	China Interbank	Government-backed entity	1.60%
1380254	China Railway	China Interbank	Government-backed entity	1.58%
1180164	China Railway	China Interbank	Government-backed entity	1.57%
0980135	China Railway	China Interbank	Government-backed entity	1.55%
1080105	China Railway	China Interbank	Government-backed entity	1.52%
1628001	Shanghai Pudong Development Bank	China Interbank	Commercial Bank	1.50%
1280175	China Railway	China Interbank	Government-backed entity	1.49%
1628022	Bank of Communications	China Interbank	Commercial Bank	1.46%

Data source: CCDC

Climate Bonds Initiative will launch a public database of China's green bonds which are aligned with international green definitions on [CBI Chinese website](#) in early August!

*Note on figures: Figures used in this report refer to both onshore and offshore green bonds issued by entities domiciled in mainland China, and green panda bonds unless otherwise stated. Internationally aligned green bonds are those aligned with both local and international definitions of green. Green bonds issued by Hong Kong and Taiwan domiciled entities are not included in the figures as the markets are separately regulated.

This report produced by **Climate Bonds Initiative** in partnership with **China Central Depositing and Clearing Co. (CCDC)**

July 2018

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