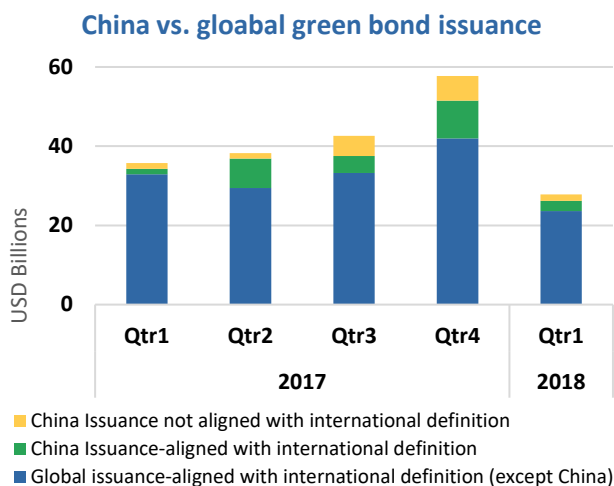


China Green Bond Market Newsletter Q1 2018

中国绿色债券市场季报 2018 年第 1 季度

JAN-MAR 2018/2018 年 1 月至 3 月

Market Overview



At a Glance

Total Q1 Chinese Issuance:
USD4.4bn / RMB 28bn

Issuance that meets international definitions:
USD2.6bn/RMB16.5bn

Largest issuer:
Beijing Capital

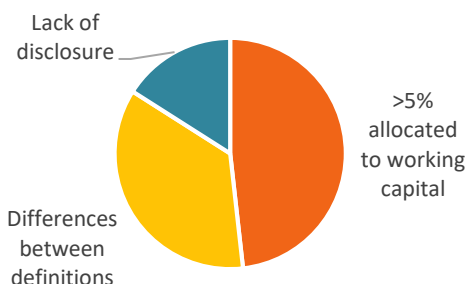
Largest issuing sector:
Green buildings

Q1 witnessed a 50% volume increase, year on year

Total green bond issuance from China went up to USD4.4bn, a 50% increase year on year. However, 40% of new deals are not in line with international green bond definitions.

Over half the bonds, which are not aligned, were excluded due to a high intended use of proceeds to finance general working capital, well above our limit of 5% of raised funds. As we have noted in previous newsletters, these bonds are acceptable under the guidelines set forth by the National Development and Reform Commission (NDRC), but they are not defined as green by the international community and are thus not eligible for inclusion in our green bond list.

Exclusion due to working capital

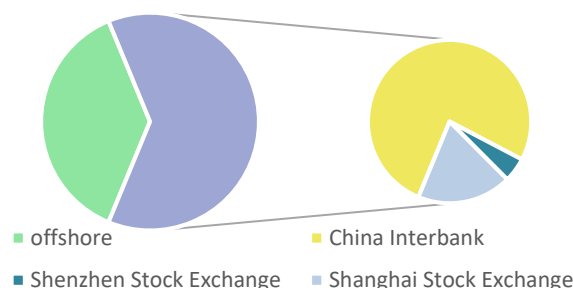


Strong momentum from non-financial corporates

Issuance from non-financial corporates doubled compared to the same period last year, and accounted for 48% of Q1 issuance. 9 out of 11 non-financial corporate issuers are new to the market, including Suntien Green Energy, Zhejiang Huayou Cobalt Co and Zhuhai Huafa Comprehensive Development.

Financial corporates issued a total of USD1.3bn in Q1, while government-backed entities raised USD811m.

Offshore issuance made up of 38%

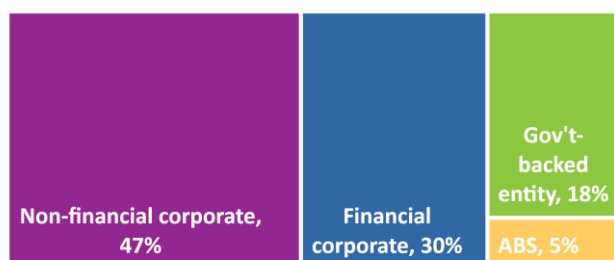


Offshore issuance surged in the first quarter

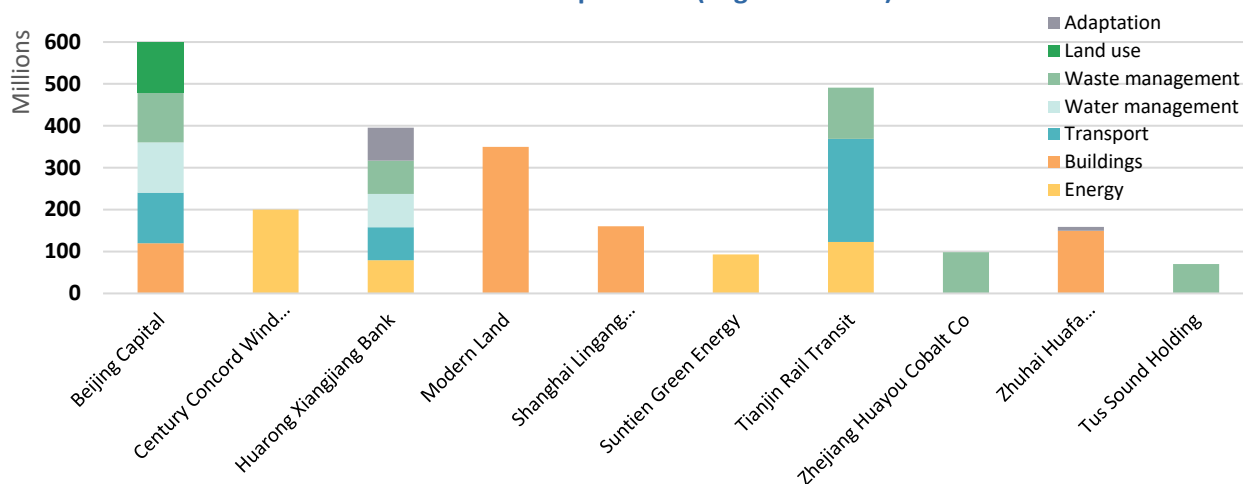
Offshore issuance rose due to steps taken by some leading corporates and big commercial banks. What's more, issuers from a more diversified sector base issued green bonds on offshore markets. In addition to repeat green bond issuer Modern Land, Tianjin Rail Transit, Beijing Capital and Century Concord Wind Power issued their first offshore green bonds, raising USD1.6bn.

Hong Kong, Singapore, and Euro MTF were the most popular offshore listing venues in Q1. Domestic issuance was placed mainly through the China Interbank market.

Non-financial corporates drove growth



Allocation of proceeds (aligned issuers)

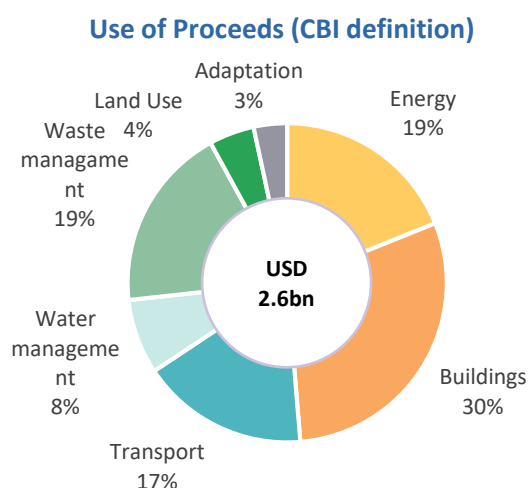


Diverse use of proceeds is on trend

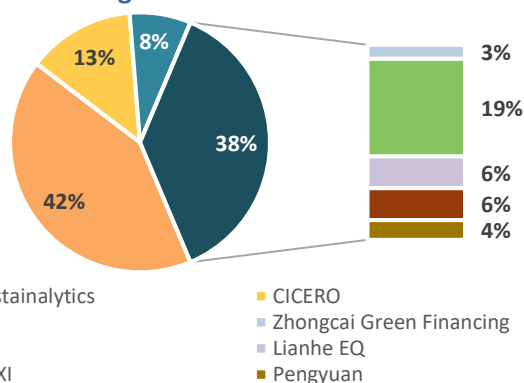
The largest proportion of proceeds were allocated to clean energy, as defined by PBoC. Allocations to green building – a sub category of Energy Conservation under PBoC’s Green Bond Endorsed Project Catalogue – also contributed significantly to the mix. Shanghai Lingang Economic Development, Modern Land and Zhuhai Huafa Comprehensive Development issued green bonds to raise funding for commercial property development that has been certified as LEED Gold or China Green Building Evaluation Standard 2-Star.

92% of new aligned issuance carries an external review

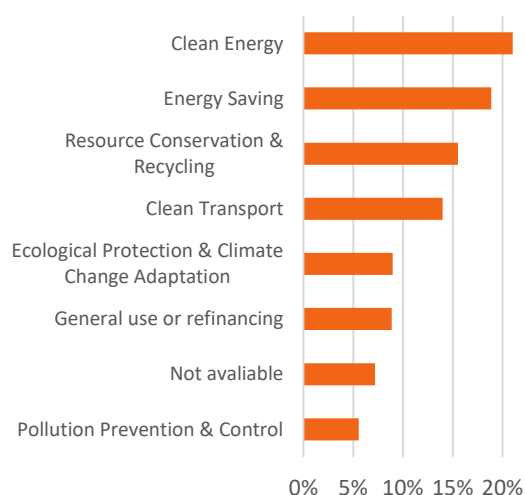
This achievement demonstrates an improvement in green credentials. Sustainalytics has joined the reviewer list for the first time and was the largest external review provider for Chinese green bonds in the quarter thanks to two offshore deals, for which it provided second opinions: Beijing Capital and Tianjin Rail Transit (or USD 1.1bn of green bond issuance in total).



92% of aligned issuance have a review



Use of Proceeds (PBoC definition)



Note: Percentages may exceed 100% due to rounding

Policy updates

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 issue.

PBoC strengthens supervision of green bond allocations

In March, People’s Bank of China 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 reports from green bond issuers on use of proceeds and prescribes templates for quarterly and annual reporting.

What is securitisation?

Securitisation enables companies and lenders to sell off existing financial assets to free up capacity for more business. It is the process through which an issuer creates financial instruments – asset backed securities or ABS – backed by financial assets such as mortgages or lease receivables. The ABS bonds are sold to investors who receive a return drawn from the cash flows of the underlying assets. By aggregating the funding into a common structure, securitisations enable institutional investors to finance small-scale assets and small- and medium-size businesses.

A growing green securitisation market in China

China's securitisation market has seen an exponential increase as it scaled up from negligible volume in 2013 to USD170bn annual issuance in 2017. The first Chinese green ABS were issued in 2016. To date, there have been 15 ABS deals totalling USD2.6bn. The proportion of green ABS increased from 1.7% of total green bond issuance in 2016 to 5.9% in 2017. However, green securitisations remain a small proportion of the green bond market, and the potential for growth is huge.

Allocations have covered a variety of climate themes such as renewables, low carbon buildings, water management and low carbon transport. The types of security have also become more diversified and include revenues from wind turbine and other renewable energy equipment leasing, green commercial building mortgage receivables, account/bill receivables, etc. China now has a diverse sector range in green ABS issuance.

Chinese Green ABS issuance

Issuer	Asset / ABS collateral	Amount (CNY)
Huadian Fuxin Energy	Electricity infrastructure Receivables	840m
Goldwind	Wind power revenue receivables	1.3bn
Wuxi Transport	Public Transport revenue receivables	2.0bn
Agricultural Bank of China	Loans*	1.4bn
SPIC Ronghe Financial	Wind and Solar Lease	2.5bn
Gezhouba Lvyuan	Waste Recycling receivables	1.3bn
Beijing Water Enterprise	Sewage treatment receivables	2.1bn
Nantong Eco&Tech	Sewage treatment receivables	510bn
TGOOD	Power distribution revenue receivables	983m
Sound	Sewage treatment receivables	820m
Gezhouba	Hydroelectricity receivables	800m
Wuhan Metro	Trust beneficiary rights	1.5bn
Guiyang Transport	Public Transport revenue receivables	2.7bn
Harvest Capital	Green CMBS mortgage	820m
Tus Sound Holding	Trust beneficiary rights	445m

* Further assessment pending for loan and bond use of proceeds.

What's a green securitisation?

A securitisation can be defined as "green" when the underlying cash flows relate to low-carbon assets or where the proceeds from the deal are earmarked to invest in low-carbon assets.

Eligible underlying assets

The underlying collateral pool comprises financial assets such as:

- mortgages on certified buildings, e.g. under LEED, BREEAM, Energy Star or other building standards
- mortgage financing for energy efficiency upgrades
- loans/leases on electric vehicles and hybrids
- loans/leases on solar and wind assets
- loans/leases on equipment, e.g. EV charging stations
- loans for energy efficiency improvements
- loans to green (pure-play) SMEs

We provide three case studies of Chinese green ABS to showcase the variety of collateral and how it is used to secure the deals.

Case study: solar and wind leases

In a solar or wind lease agreement, the solar or wind leasing company entitles the operator to the benefits of the system (i.e., the energy that the solar panels or wind turbines generate) for the term of the contract. Under these arrangements, the leasing company owns and maintains the solar panel or wind turbines, or the solar or wind farms.

Solar and wind ABS deals are usually backed by the lease payments and power purchase agreements related to the solar and/or wind farms, or, in some cases, by loans extended to fund the acquisition and installation. Either way receivables are used to fund the payment of interest and repayment of the debt raised with the bonds.

SPIC Ronghe Financial Leasing, a subsidiary of the State Power Investment Corporation (SPIC), issued a green ABS deal of CNY2.48bn in November 2017. The deal comprises 4 senior and one subordinated tranche.

It is collateralised by lease payment from 17 lessees for renewable energy assets including 13 wind farms and 4 solar farms across China.

Tranches	Amount (CNY m)	Tenor (Year)	Rating
Senior A1	569	0.4	AAA
Senior A2	969	1.4	AAA
Senior A3	200	1.6	AAA
Senior B	137	1.6	AA
Subordinated tranche	607	4.1	n/a

Securitisations are structured finance transactions. A key feature is creating debt tranches with different risk and/or repayment characteristics. Different risk and repayment characteristics command different pricing and appeal to different investors.

Case study: green CMBS

Commercial mortgage-backed securities are ABS deals secured on commercial mortgages.

China recorded the first green CMBS in 2017. The three-tranche deal was issued by **Harvest Capital Management** and CECEP Group. The 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.

Tranches	Amount (CNY m)	Tenor (Year)	Rating
Senior A	500	11.6	AAA
Senior B	279	11.6	AAA
Subordinated tranche	41	11.6	n/a

ABS deals can be secured by both commercial and residential mortgages. The biggest green bond issuer in the mortgage backed securities space is US agency Fannie Mae which issues Green MBS secured on multifamily properties (apartment buildings, operated by commercial landlords). There have also been a number of green RMBS, which are secured on residential mortgages.

Case study: water treatment receivables

Any stream of receivables or revenues can be used to secure an ABS deal. Green ABS may be relatively new and limited in number of deals so far, but the range of financial assets and structures is diverse.

One example of ABS backed by receivables is provided by **Beijing Enterprises Water Group**. As the operator of 19 water treatment plants under takeover-operate-transfer (TOT) or build-operate-transfer (BOT) contract with 16 municipalities, it's green ABS is backed by water treatment service fee receivables, proceeds raised is allocated to another 9 water infrastructure projects that fall into Pollution Prevention, Resource Recycling and Adaptation categories under PBoC's green bond catalogue.

Tranches	Amount (CNY m)	Tenor (Year)	Rating
Senior 1	260	1.0	AAA
Senior 2	260	2.0	AAA
Senior 3	270	3.0	AAA
Senior 4	300	4.0	AAA
Senior 5	310	5.0	AAA
Senior 6	600	7.0	AAA
Subordinated tranche	100	7.0	n/a

News and events

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.

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 to enhance international visibility and transparency of Chinese green bonds.

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.



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