

Research Report

The Burgeoning Mainland Green ABS Market and the Potential Support from the Hong Kong Market



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SUMMARY

Green asset-backed securities (ABSs) are a special type of green bonds, which are collateralised by green base assets from which the income payments are derived or the funds raised or freed-up capital are used to finance green projects. In Mainland China, green ABSs are a growth driver of the green bond market, with exchange-traded green ABSs dominating in issue amount and number of issues.

In the Mainland, green ABSs may be classified into three main types: the green versions of respectively credit ABSs, enterprise asset-backed notes (ABNs) and corporate ABSs. The “green” elements, including the base assets, uses of proceeds/funds raised, in each of the three main types of ABS may be implied or explicitly specified in related rules and regulations, or given in specific rules and regulations tailor-made for green ABSs. From the beginning, different Mainland authorities have different green definitions in their respective rules and regulations, including the definition of green loans and green bonds, but these are being harmonised. The issuance, listing and trading arrangements of green ABSs in the Mainland follow related rules and regulations governing the respective types of ABS.

Despite a slowdown in growth momentum experienced in 2020 due to the COVID-19 pandemic and other challenges, the long-term growth of the Mainland green ABS market is expected to continue. This will be stimulated by supportive market policies and the increasing market demand from both the issuer and investor sides that is driven by the Central Government’s promotional policies on “green industries” on the backdrop of the global trend of environment, social and governance (ESG).

Green finance is expected to grow further in the Mainland and more green financing channels are needed. Hong Kong has been an offshore financing centre for Mainland enterprises and could play a contributive role in supporting green finance in the Mainland. The Green and Sustainable Finance Cross-Agency Steering Group has been established to promote green finance in Hong Kong. Serving the burgeoning green finance and securitisation market segment, Hong Kong offers an efficient and robust market, in particular the exchange platform, to support the development of Mainland green finance and investment vehicles, including green ABSs, through offshore issuance and listing, improved transparency to offshore investors, onshore liquidity support and offshore access, and related product development. A well-supported green ABS market would in the end contribute to the mobilisation of private capital for the sustainable economic activities in the Mainland and Hong Kong.

1. GREEN ABS AS A NEW GROWTH ENGINE OF MAINLAND GREEN BOND MARKET

Asset-backed securities (ABSs) are a special kind of bond which is the security issued as a result of the “securitisation of the base assets”, i.e. a security which is collateralised by the underlying asset or a pool of assets and the income payments of which are derived from the base assets. In the global market, an ABS is usually defined as “green” if (1) the cash flows (or income payments to investors) are generated from green base assets, and/or (2) the funds raised or freed-up capital of the original asset owner are invested in green projects¹. These green base assets or green projects shall be classified according to recognised green standards.

The issuance of green bonds in the global market has trended upward since 2014². Underpinned by strong investor demand, green bonds have been a major funding source for green projects. Although the momentum moderated somewhat in 2020 as the financing demand was diverted into issuing bonds for non-green (e.g. social and healthcare) purposes to face up to the challenges of the pandemic, the increasing investor demand is expected to support the growth in the long-term³. The potential benefits of issuing green bonds include better reputation and lower funding costs⁴. As a special kind of green bonds, green ABSs offer additional potential benefits including (1) transferring green loans from banks’ balance sheet to a special purpose vehicle (SPV) to free up regulatory capital for more lending; (2) lowering the leverage ratio of corporates’ balance sheet; and (3) lowering the funding cost for green projects which will be exposed to a better risk profile than the business mix of the issuer⁵.

The world’s largest green bond market is the US — the issue amount of green bonds in the US accounted for about 20% of total green bonds issued globally in 2019, about 45% of which (US\$22.9 billion) were issued by Fannie Mae which was then the world’s largest green bond issuer⁶. Green mortgage-backed securities (MBSs) are a type of green ABS with mortgages on green buildings as the base assets. Other types of green ABS in the global market include the green versions of synthetic ABS on green loans, property assessed clean energy (PACE) ABS, solar ABS, auto ABS and receivables and lease receivables ABS⁷.

In the Mainland, green ABSs are a growth driver of the green bond market. It was reported that the first green ABS in the Mainland was issued in July 2006 on the base asset of water management projects, but this ABS was not labelled as “green” at that time⁸ (possibly because it might not comply with the Mainland’s green definitions, see Section 2). According to the same source, the first labelled green ABS was issued by a bank in 2016 on the base asset of a pool of green loans. The growth of the Mainland green ABS market picked up

¹ See *Green Bond Principles*, issued by International Capital Market Association (ICMA), June 2018; Rado, G., “Green securitisation: unlocking finance for small-scale low carbon projects”, published on the website of Climate Bonds Initiative, 17 August 2018; Fiscale, C., F.D. Monte, A. Feliciani, G. Arenaccio and M. Scuriatti, “Italy: Green ABS: a new opportunity”, published on the Hogan Lovells’ website, 21 February 2020.

² See HKEX research report, “The green bond trend: Global, Mainland China and Hong Kong”, published on HKEX’s website, 13 December 2018.

³ See “Sustainable debt: Global state of the market H1 2020”, published on the CBI’s website, 22 October 2020.

⁴ See “Why green bonds”, webpage on gogreenbonds.org, viewed on 2 July 2020.

⁵ See International Institute of Green Finance of Central University of Finance and Economics, “The current landscape, advantages and outlook of the development of green ABS” (〈綠色ABS發展的現狀、優勢與展望〉), *xinhua08.com*, 12 July 2018.

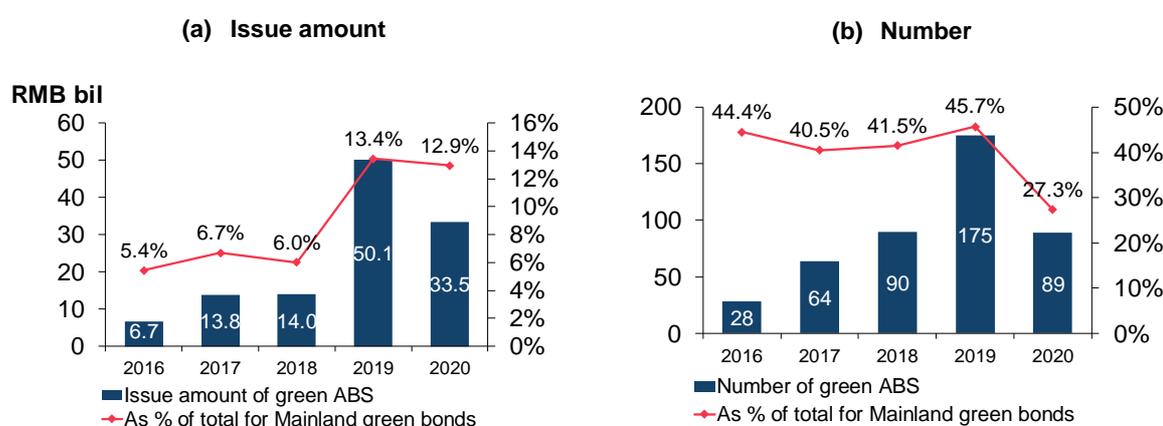
⁶ Source: “2019 Green Bond Market Summary”, published on the CBI’s website, February 2020.

⁷ See CBI’s briefing paper, “Green securitisation — Unlocking finance for small-scale low carbon projects”, published on CBI’s website, March 2018. All these underlying asset types are classified as “green”, which include future cash flows from green assets (e.g. cost saving from energy improvements for PACE ABS, cash flows from solar assets, receivables of income flows) or financing of acquisition or construction of green assets (e.g. leases of electric vehicles).

⁸ Source: CBI and International Institute for Sustainable Development (IISD), “Roadmap for China: using green securitisation, tax incentives and credit enhancements to scale green bonds”, published on the CBI’s website, 11 May 2016. This source does not contain the complete list of green ABSs in the Mainland since 2006.

subsequently and the issue amount and number of newly issued green ABSs reached a record high of RMB 50.1 billion and 175 green ABSs respectively in 2019 and accounted for 13.4% of the total green bond issue amount and 45.7% of total number of newly issued green bonds in the Mainland (see Figure 1). Although the issue amount dropped somewhat in 2020 under the COVID-19 pandemic situation, the issue amount in 2020 still exceeded the amount in 2018. The moderation of momentum in 2020 was mainly attributable to the adverse impact of the COVID-19 pandemic, in response to which the Mainland authorities implemented a series of policy measures in early 2020 to support economic activities. These include the introduction of temporary measures to support bank loans and bond issuance by small and micro enterprises⁹. The demand of these enterprises in the Mainland for financial channels may divert away from ABSs, including green ABSs. This may explain the short-term decline of green ABS issuance in 2020.

Figure 1. Issue amount and number of newly issued green ABSs in the Mainland (2016 – 2020)



Note: Green ABSs include those classified as “green ABS” according to Wind’s definition and those explicitly named as a green ABS.

Source: Wind.

In the Mainland, during 2016 to 2020, 61.9% of Mainland green ABSs were rated AAA (11.4% AA+, 2.2% AA, 0.7% A+ and 23.8% unrated) (see Table 1). During this period, the average coupon rates at issuance of green ABSs with ratings of AA, A+ and of unrated ones were lower, while those of green ABSs rated AAA and AA+ were higher, than those of non-green ABSs of the corresponding rating categories. No green ABSs were rated AA- or below A+ in the same period.

⁹ Source: *Further Strengthening Financial Support for Prevention and Control of the Pneumonia Outbreak Caused by COVID-19* (《關於進一步強化金融支援防控新型冠狀病毒肺炎疫情的通告》), issued by the People’s Bank of China (PBOC), Ministry of Finance, China Banking and Insurance Regulatory Commission (CBIRC), China Securities Regulatory Commission (CSRC) and State Administration of Foreign Exchange (SAFE), 31 January 2020; *Releasing Special Relending Fund to Support Matters Related to the Prevention and Control of COVID-19 Outbreak* (《中國人民銀行關於發放專項再貸款 支持防控新型冠狀病毒肺炎疫情的有關事項的通告》), issued by the PBOC, 31 January 2020; *Fully Leveraging the Government-backed Financing Guarantee in Credit Enhancement for the Financing by Small and Micro Enterprises, Agricultural Businesses, Farmers and Businesses in Rural Areas* (《關於充分發揮政府性融資擔保作用為小微企業和“三農”主體融資增信的通知》), issued by the Ministry of Finance, 27 March 2020.

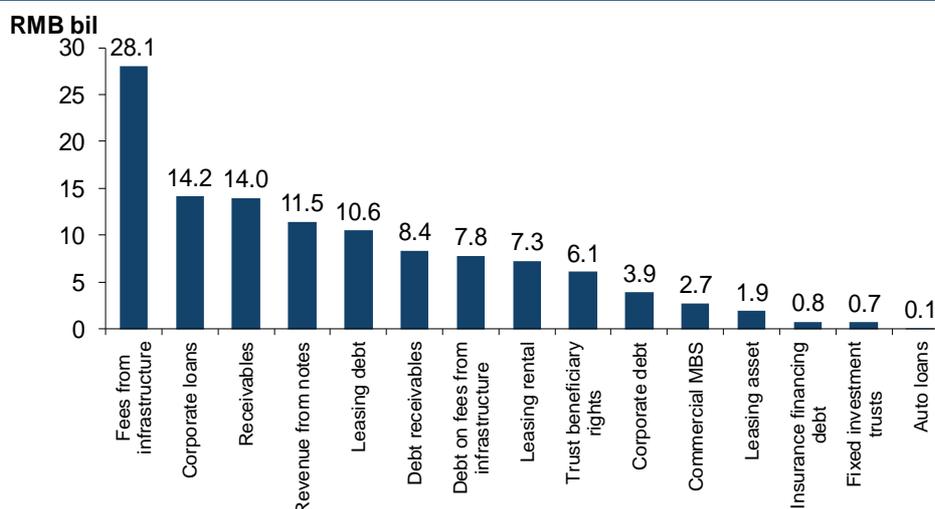
Table 1. Average coupon rate of ABSs by credit rating at issuance (2016 – 2020)

Credit rating of ABSs	Green ABSs			Non-green ABSs			Difference in average coupon rate (% pt)
	Number	% of total	Average coupon rate (%)	Number	% of total	Average coupon rate (%)	
AAA	276	61.9%	4.81	7,355	44.9%	4.66	0.16
AA+	51	11.4%	6.42	2,234	13.6%	5.55	0.87
AA	10	2.2%	5.73	628	3.8%	6.14	-0.42
AA-	0	0.0%	—	94	0.6%	5.60	—
A+	3	0.7%	5.36	98	0.6%	6.07	-0.71
Below A+	0	0.0%	—	128	0.8%	5.60	—
Unrated	106	23.8%	4.64	5,849	35.7%	5.04	-0.40
Overall	446	100.0%	5.06	16,386	100.0%	4.99	0.07

Note: The overall average coupon rates for green ABSs and non-green ABSs are simple averages of the coupon rates of individual ABSs across different credit ratings without any adjustment for the difference of credit rating at issuance. Therefore, they are not directly comparable.

Source: Wind.

In the Mainland, one major usage of green ABSs is to support the financing of green infrastructure projects, which in turn generate cash flows to meet the coupon payments for investors in the ABSs. This is evidenced from the fact that infrastructure-related base assets (including fees from infrastructure and the debt on these fees) accounted for the largest share of green ABS issued during 2016 to 2020 — an issue amount of RMB 35.9 billion, about 30% of the total issue amount of green ABSs during the period (see Figure 2). Other base assets of green ABSs in the Mainland market include receivables, corporate loans, trust beneficiary rights, leasing asset and debt, commercial MBS and auto loans.

Figure 2. Total issue amount of green ABS by type of base asset (2016 – 2020)

Note: Green ABSs include those classified as “green ABS” according to Wind’s definition and those explicitly named as a green ABS.

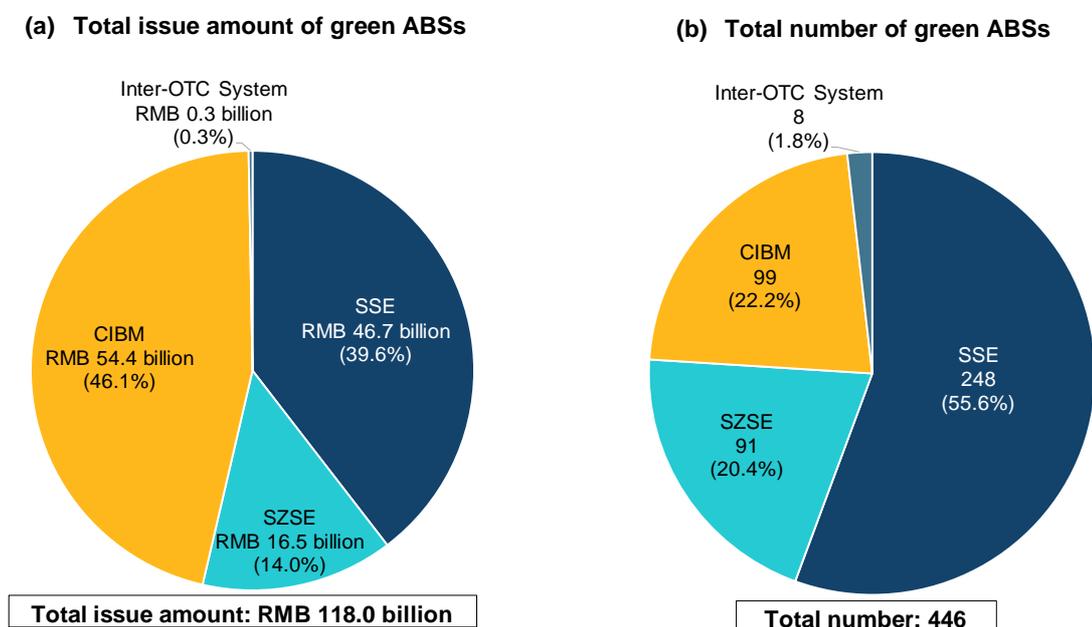
Source: Wind.

In the Mainland, the majority of green ABSs are issued and traded on exchanges.

During 2016 to 2020, the total issue amount of green ABS reached RMB 118.0 billion, with the total number reached 446. About 54% of them in issue amount were issued and traded on Mainland exchanges — 39.6% on the Shanghai Stock Exchange (SSE) and 14.0% on the Shenzhen Stock Exchange (SZSE), while about 46% were issued and traded on the China Interbank Bond Market (CIBM) and a negligible proportion (0.3%) on the Inter-institutional

Privately Offered Product Quotation and Service System (Inter-OTC System, 機構間私募產品報價與服務系統)¹⁰. (See Figure 3.)

Figure 3. Total issue amount and number of green ABSs in the Mainland by trading venue (2016 – 2020)



Note: Green ABSs include those classified as “green ABS” according to Wind’s definition and those explicitly named as a green ABS.

Source: Wind.

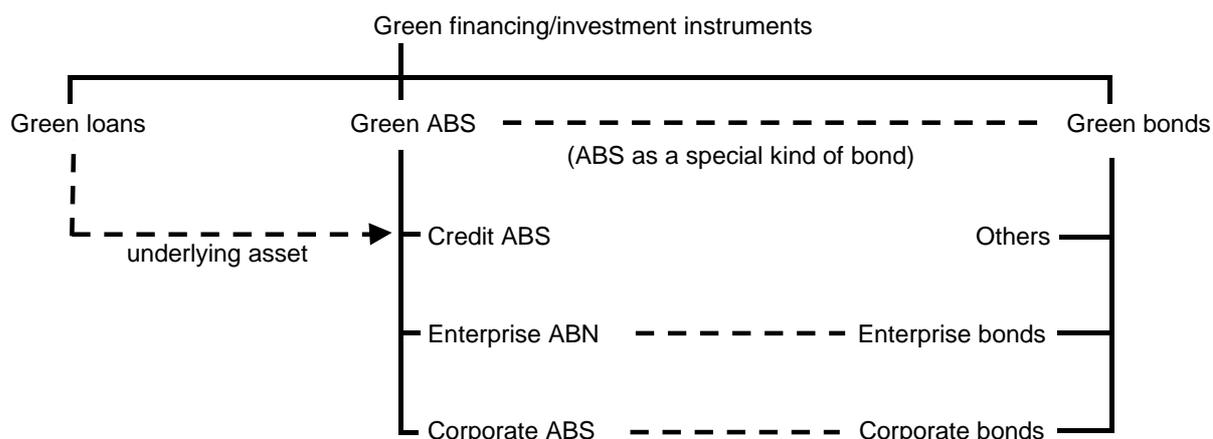
2. OPERATIONS OF THE MAINLAND GREEN ABS MARKET

2.1 Classification of ABS and definition of green ABS in the Mainland

In the Mainland, green financing/investment instruments comprise basically green loans, green bonds and green ABSs which are regarded as a special kind of green bonds (see Figure 4). Green ABSs may be classified into three main types: the green versions of respectively credit ABSs, enterprise asset-backed notes (ABNs) and corporate ABSs. These green instruments operate in the context of their respective types of security, each of which has their own regulatory framework. The nature of each of the three types of ABS is described below¹¹.

¹⁰ Inter-OTC System is authorised by the CSRC and operated by the Securities Association of China (SAC) as a platform to provide quotation, issuance and trading services for privately-offered products, which include certain privately-offered ABSs, among eligible institutional investors only (see “Company introduction” (〈公司介绍〉), webpage on interotc.com.cn, viewed on 2 July 2020). The CSRC issued the revised *Administrative Measures for the Issuance and Trading of Corporate Bonds* (《公司债券发行与交易管理办法》) on 23 February 2021 (effective from the same date). According to the revised rules, trading of corporate bonds, which would include corporate ABS, on the Inter-OTC System is no longer allowed.

¹¹ See Appendix for the list of key rules governing the respective types of ABS from which relevant information is obtained.

Figure 4. Basic types of green financing/investment instruments in the Mainland

(1) Credit ABS

A credit ABS is a beneficiary security collateralised by credit assets of a banking financial institution where the income payments of which are backed by cash flows generated from the credit assets. The financial institution is the “sponsoring institution” of the ABS, which sets up a SPV and transfers the base asset to it. This SPV is entrusted to an “entrusted institution” authorised by the China Banking and Insurance Regulatory Commission (CBIRC), usually a trust investment company, which serves as the issuer of the credit ABS. Service providers of a credit ABS include loan service institutions, fund custody institutions, credit rating agencies and an underwriting syndicate. The sponsoring institution is required to hold at least 5% of the credit ABS for “credit risk retention”¹². This type of ABS is governed by the People’s Bank of China (PBOC) and the CBIRC and are traded on the CIBM.

(2) Enterprise ABN

An enterprise ABN is a securitised financing instrument issued by a non-financial enterprise (“sponsoring institution”) itself or via a SPV, for fund-raising purposes. The income payments, comprising interest payments and principal repayment, are backed by cash flows generated from base assets which can be receivables, commercial real estate, infrastructure, beneficiary rights to rentals or debts, or other property rights. Service providers of enterprise ABNs include SPV management institutions, asset service institutions which administer the base asset, key underwriters, fund supervision institutions, fund custody institution, credit rating agencies, credit enhancement service institutions, law firms, accounting firms and asset valuation institutions. This type of ABS is governed by the PBOC and under self-regulation by the National Association of Financial Market Institutional Investors (NAFMII). They are traded on the CIBM.

(3) Corporate ABS

A corporate ABS is a securities product issued under a specialised plan of asset-backed securitisation which is the SPV set up by a securities company or a subsidiary of a fund management company for this purpose. The securities company or the subsidiary of the fund management company must have a licence in client asset management and will act as the manager of the ABS. Base assets of corporate ABSs are legitimate property rights

¹² The requirement was introduced in December 2013. Source: *Announcement on Further Regularising Credit Asset Securitisation* (《關於進一步規範信貸資產支持證券的公告》), PBOC and formerly China Banking Regulatory Commission (CBRC), 31 December 2013.

or properties that could generate independent, predictable cash flows. These could be corporate receivables, rights to rentals or credit assets, beneficiary rights to trusts, infrastructures or real estate like commercial properties. Original beneficial owners of the base assets are usually business corporations which seek to raise funds through the ABS. The custody service of base assets can be provided by commercial banks, securities companies or other custodian service institutions which have the related business licence, or China Securities Depository and Clearing Co., Ltd (CSDC). Corporate ABSs are governed by the China Securities Regulatory Commission (CSRC) and traded on stock exchanges, the National Equities Exchange and Quotations System (NEEQ, the off-exchange market or the “New Third Board”) and other securities trading venues approved by the CSRC.

In addition to the above three main types of ABS, insurance asset-backed beneficiary certificates (ABC) is another type of ABS in the Mainland which are governed by the China Insurance Regulatory Commission (CIRC) (now integrated with the former China Banking Regulatory Commission (CBRC) to become CBIRC). Insurance ABCs are issued via SPVs by insurance asset management companies to insurance companies. The base assets are legitimate properties, property rights or asset portfolios of these which can directly generate independent and sustainable cash flows. However, specific policy or regulatory documents that specify green assets as the base assets of insurance ABCs are not found.

The various types of ABS in the Mainland, though governed by different regulations, have certain common basic features. They utilise the funding structure of a SPV to which the base assets are transferred from the original asset owners. They are issued to institutional investors only. The base assets shall generate cash flows to fulfil the income payment obligations borne by the ABS. They are served by a range of service providers, including base asset managers, custodians of funds who safekeep the cash flows generated from base assets, optionally credit rating agencies to provide credit ratings of the ABSs and possibly underwriters to underwrite the ABS issue.

The three main types of ABS — credit ABS, enterprise ABN and corporate ABS — have their respective green versions, i.e. green ABSs. The different types of green ABS are governed by the applicable rules and regulations for the corresponding type of security and the specific rules and regulations applicable to the respective type of green ABS, which are formulated and enforced by the respective regulatory authorities (see Appendix). At the beginning, the Mainland authorities had different green definitions in their respective rules and regulations, including the definition of green loans and green bonds. In February 2019, seven Mainland authorities¹³ jointly issued a Catalogue of green industries (referred to as the “Green Industry Catalogue 2019”), which serve as a common set of green definitions to be applicable to all kinds of green activity, including green finance. The six main categories of green industries in the Catalogue are Energy Saving Industry, Clean Production Industry, Clean Energy Industry, Ecology and Environmental Industry, Green Infrastructure Enhancement and Green Services.

The “green” elements in each of the three main type of ABS may be implied or explicitly specified in related ABS rules and regulations, or given in specific rules and regulations tailor-made for green ABS, as described below:

¹³ These are National Development and Reform Commission (NDRC), Ministry of Industry and Information Technology, Ministry of Natural Resources, Ministry of Ecology and Environment, Ministry of Housing and Urban-Rural Development, PBOC and National Energy Administration.

(1) Green credit ABS

The base assets of green credit ABSs are green loans. While there are policies and regulations with regard to green loans, there are no specific rules and regulations on green credit ABS. For promoting green credit business in the banking industry in order to support the national policy of environmental protection and green economy, the former CBRC issued the *Guidelines on Green Loans* (《綠色信貸指引》) in January 2012. According to the guidelines, banks are required to formulate suitable credit policy systems and procedures to identify, measure, monitor and control the environmental and social risks in their credit businesses. These risks include energy consumption, pollution, land, health, safety, residential movements, ecosystem protection, climate change, etc. In addition, there are two sets of standards on green loans for statistical reporting purposes — one issued by the former CBRC in July 2013 and the other issued by the PBOC in January 2018, which was revised in December 2019. Deposit-taking banking financial institutions will be subject to green credit business performance assessment by the PBOC, the result of which will be incorporated into the PBOC's grading assessment of financial institutions (i.e. "Macro Prudential Assessment", MPA)¹⁴.

In respect of green credit ABS, the clarity of "green" elements in these products are provided for in the specifications of the base assets (bank loans) in a notification issued by the former CBRC in May 2012¹⁵. Specified base assets with "green" elements include energy-saving and emissions-reduction loans.

(2) Green enterprise ABN

The green elements of green enterprise ABNs are implied in the definition of green enterprise bonds (綠色債務融資工具) in the related business guidelines issued by NAFMII in March 2017¹⁶. According to the guidelines, green enterprise bonds are debt instruments issued in the CIBM by non-financial enterprises who are legal persons, the proceeds of which shall be used in green projects including energy saving, pollution prevention, and conservation and recycling of resources. The classification of green projects as the base assets of enterprise ABNs is currently based on the PBOC's definition of green bonds in a Catalogue issued in 2015 (referred to as "Green Bond Endorsed Project Catalogue 2015"). Proposed revisions to the Green Bond Endorsed Project Catalogue 2015 were issued by the PBOC, National Development and Reform Commission (NDRC) and CSRC for public consultation in July 2020. The revised version (referred to as "Green Bond Endorsed Project Catalogue 2021") was issued in April 2021 (effective July 2021), to unify the green bond standards in the Mainland. These revisions adopt the same six main categories in the Green Industry Catalogue 2019 and exclude the use of clean coal to align with international standards.

(3) Green corporate ABS

There are specific national policy guidelines on green corporate bonds, which are also applicable to green corporate ABSs. The basic requirement is the use of proceeds in green projects, which include energy saving, pollution prevention, conservation and recycling of resources, clean transportation, clean energy, protection of ecosystem and adaptation to climate change. Similar to enterprise ABNs, the classification of green

¹⁴ See *Deposit-taking Banking Financial Institutions Green Credit Business Performance Assessment Plan (Trial Implementation)* (《銀行業存款類金融機構綠色信貸業績評價方案(試行)》), issued by the PBOC, 27 July 2018, and *Notification on the Release of "Deposit-taking Banking Financial Institutions Green Finance Performance Assessment Plan" (Draft for Consultation)* (《關於印發〈銀行業存款類金融機構綠色金融業績評價方案〉的通知(徵求意見稿)》), issued by the PBOC, 21 July 2020.

¹⁵ *Notice on Related Issues of Further Expanding the Pilot Scheme of Credit Asset Securitisation* (《關於進一步擴大信貸資產證券化試點有關事項的通知》), issued by the former CBRC, 22 May 2012.

¹⁶ *Guidelines on Green Debt Financing Instruments Issued by Non-financial Enterprises* (《非金融企業綠色債務融資工具業務指引》), issued by NAFMII, 22 March 2017.

projects as the base assets of corporate ABSs is currently based on the Green Bond Endorsed Project Catalogue 2015, which is to be replaced by the 2021 version. Original asset owners are required not to be in industries with high pollution or high energy consumption, or not in line with national industry guiding policies. Major support will be given to those which are (1) mature enterprises with a long history in green industries, (2) enterprises of high potential with leading/strategic advantage in green industries, (3) enterprises in partnership with government or social capital to support medium- to long-term development of green industries, and (4) international financial institutions or supranationals investing in or promoting the development of green industries in the Mainland.

In addition, there are specific rules at the exchange level to govern corporate ABSs. Both the SSE and the SZSE have specific rules on their pilot programmes of green corporate bonds which cover green corporate ABSs. Based on the latest guidelines on green bonds issued on 27 November 2020, the SSE and SZSE provided clarification on the classification criteria of green corporate bonds: (1) “green” assets, which are the income from or rights to debt raised for green projects, constitute at least 70% of the base asset pool; (2) “green” use of proceeds — at least 70% to be invested in green projects; and (3) “green” original asset owner — (i) green revenue either accounted for at least 50% of its total revenue in the latest financial year, or both green revenue and profit accounted for the highest share among all its business segments and are higher than 30% of the respective totals; and (ii) if the funds raised is not used in specific green projects, at least 70% of funds raised shall be used for the original asset owner’s green business development. These requirements also apply to green corporate ABSs. Separately, the SSE and the SZSE have also issued guidelines specifically on the issuance and listing of corporate ABSs.

2.2 Issuance, listing and trading of green ABS in the Mainland market

The issuance, listing and trading arrangements of green ABSs in the Mainland follow related rules and regulations governing the respective types of ABS. The issuance of green enterprise ABNs and green corporate bonds (including ABSs) is provided with a green channel or an efficient approval process, but they are subject to additional information disclosure requirements. External review/certification of green bonds (including green ABSs) is encouraged but not required.

(1) Green credit ABS

The issuance, listing and trading arrangements of green credit ABSs follow those of credit ABSs in general. Credit ABSs issued and traded on the CIBM have to obtain credit rating on a continuous basis by qualified credit rating agencies; at least two qualified credit rating agencies have to be engaged for initial credit rating. Financial institutions need to apply for related business licence from the CBIRC before engaging in the issuance of credit ABSs. Prior to issuance, the specific ABS has to be filed and registered with the CBIRC and has to be issued within 3 months after filing and registration. These ABSs can be issued to institutional investors in the CIBM through tendering via the PBOC’s bond issuance system or through private placement. The issuance of credit ABSs are to be underwritten. For ABSs traded on the CIBM, the amount of each issue shall not be less than RMB 500 million and the amount of each grade in an issue shall not be less than RMB 200 million.

Financial institutions which are eligible under laws and regulations to invest in government bonds and financial bonds may invest in ABSs within the scope authorised by laws and regulations and CBIRC rules. Non-banking financial institutional investors, including insurance companies, securities investment funds, enterprise pension funds and the

National Social Security Fund (NSSF), can also invest in credit ABSs. A single banking financial institution may not buy in more than 40% of the issue amount of a single ABS.

ABSs are traded as cash securities on the CIBM. Credit ABSs issued by private placement to designated investors are to be transferred between placees only. The trading, clearing and settlement rules and procedure for ABSs traded on the CIBM follow those for bonds traded on the CIBM. These ABSs are traded through request-for-quote (RFQ) and click-to-trade mechanisms. The minimum trading size for ABS on CIBM is RMB 100,000 and the trading unit is RMB 10,000. China Central Depository and Clearing Co. Ltd. (CCDC) provides registration and custody, clearing and settlement services for ABSs traded on CIBM. The pre-issuance and on-going information disclosure for all kinds of ABS in the CIBM are available on the website of China Foreign Exchange Trade System (CFETS).

(2) Green enterprise ABN

Green enterprise ABNs are issued and traded on the CIBM, in the same way as for general enterprise ABNs. The issuance of an enterprise ABS requires registration with NAFMII. Initial issuance has to be completed within 6 months upon registration and follow-on issues are required to be filed with NAFMII. NAFMII provides a green channel with a streamlined approval process for the issuance of green enterprise ABNs. The issuance can be conducted through public offering or private placement to institutional investors on the CIBM. Centralised book-building or tendering may be adopted. Credit rating is required for publicly offered enterprise ABNs. “Green” assessment by a third-party certification institution is encouraged but not mandatory.

The required pre-issuance and on-going information disclosure of enterprise ABNs as well as disclosures on green definitions, are reported to NAFMII’s Integrated Business and Information Service Platform and then made available to public on the websites of CFETS and other dedicated information disclosure platforms¹⁷. Trading, clearing and settlement of enterprise ABNs on the CIBM are in the same way and governed by the same set of rules as for credit ABSs on the CIBM.

(3) Green corporate ABS

Green corporate ABSs are issued through private placement to not more than 200 qualified institutional investors. Each subscription may not be less than RMB 1 million in nominal value of the issue. Under the CSRC related guidelines, green channels are provided for streamlined approval of the issuance and listing of green corporate bonds, including ABSs. The issuance of corporate ABSs has to be filed with the Asset Management Association of China (AMAC) and the listing on an exchange has to be approved by the exchange. The SSE will issue a no-objection letter to the applicant, which is valid for 12 months for a single issue or 24 months for an issue programme with different issue tranches where the first tranche needs to be completed within 12 months. Similarly, the SZSE will issue a no-objection letter to the applicant for the listing of ABS on its market.

Trading venues of ABSs include exchanges (the SSE and the SZSE), the NEEQ, the over-the-counter market at securities companies¹⁸. Securities companies offer two-way quotation service for ABS trading in the OTC market. On the exchange market, the SSE

¹⁷ These include those provided by the registration and custody institutions and Beijing Financial Assets Exchange. Source: *Rules on the Information Disclosure of Non-financial Enterprise Debt Financing Instruments on the CIBM* (《銀行間債券市場非金融企業債務融資工具信息披露規則》), issued by NAFMII, 8 December 2017.

¹⁸ According to the revised rules by the CSRC issued in February 2021, corporate bonds (which would include corporate ABSs) are no longer traded on the Inter-OTC System. (See Section 1 above).

allows ABSs to be used for collateralised repurchase financing, requires the minimum order size to be RMB 1 million in nominal value terms, and assigns standardised indicators to green corporate bonds. Similarly, the minimum order size for ABS on the SZSE is also RMB 1 million. CSDC is responsible for the clearing and settlement of listed ABSs.

For listed corporate ABSs, the pre-issuance and on-going information disclosure is available on the websites of the SSE and the SZSE. In particular, the SSE has a dedicated segment for displaying the list of green securities listed on it, including green corporate ABSs.

The key features of green ABSs are summarised in Table 2 below.

Feature	Credit ABS	Enterprise ABN	Corporate ABS
Regulator	PBOC and CBIRC	PBOC/ NAFMII (self-regulator)	CSRC/ AMAC (self-regulator)/ SSE or SZSE for listed ABS
Funding structure	SPV	SPV	SPV
Base asset	Credit assets including loans for national major infrastructure, agriculture, small and medium-sized enterprises (SMEs), qualified local government financing vehicles (LGFVs), energy conservation, strategic emerging sectors, innovative cultural sectors, protective housing construction and auto loans	Receivables, commercial real-estate, infrastructure, beneficiary rights to rentals or debts or other property rights	<ul style="list-style-type: none"> Corporate receivables, rights to rentals or credit assets, beneficiary rights to trusts, infrastructures or real estate Not in the AMAC's negative list
Definition of "green"	Base asset of green loans as classified by PBOC's "Special Statistical Framework for Green Loans"	Base asset of green projects as classified by Green Bond Endorsed Project Catalogue	<ol style="list-style-type: none"> Base asset of green projects as classified by Green Bond Endorsed Project Catalogue Issuers not in high pollution or high energy consumption sectors (a) at least 70% of base asset is green; (b) at least 70% of funds raised by original asset owner is used in green projects; or (c) original asset owner has green revenue accounting for at least 50% of its total revenue or for the highest share (between 30%-50%) among its business segments
Original asset owner	Financial institutions including commercial banks, policy banks, trust investment companies, finance companies, city credit cooperatives and rural credit cooperatives ("sponsoring institutions")	Non-financial enterprises with legal person status ("sponsoring institutions")	Any corporations
Issuer	Entrusted institutions (trust investment companies)	Sponsoring institutions or SPVs	Licensed securities companies and subsidiaries of fund management companies

Table 2. Key features of major types of green ABS in Mainland China			
Feature	Credit ABS	Enterprise ABN	Corporate ABS
Service providers	<ul style="list-style-type: none"> • Loan service institutions • Fund custody institutions • Credit rating agencies • Underwriting syndicate 	<ul style="list-style-type: none"> • SPV management institutions • Asset service institutions • Fund supervision institutions • Fund custody institutions • Credit enhancement service institutions • Lawyers and accountants • Credit rating agencies • Key underwriters • Asset valuation institutions • Green assessment or certifying institutions 	<ul style="list-style-type: none"> • SPV management institutions • Asset custody institutions (e.g. banks) • Credit rating agencies • Underwriting syndicate • Green assessment or certifying institutions
Mode of approval	<ul style="list-style-type: none"> • Business licensing of issuer • Filing and registration of ABS 	<ul style="list-style-type: none"> • Filing and registration of ABS • Green channel for approval 	<ul style="list-style-type: none"> • Filing of ABS • Approval by exchanges for listing of ABSs • Green channel for approval
Credit rating	Required, but not for ABSs issued by private placement	Required for publicly offered ABSs, except for the lowest grade in stratified issue	Optional
Issue method	<ul style="list-style-type: none"> • Tendering through PBOC's bond issuance system • Private placement • Underwriting required 	<ul style="list-style-type: none"> • Public offering • Private placement 	Private placement to not more than 200 institutions
Eligible investors	Institutional investors on CIBM, including banks, insurers, securities investment funds, corporate pension funds, NSSF		Qualified institutional investors including banks, securities companies, fund management companies, trust companies, insurers, wealth management products, Qualified Foreign Institutional Investors (QFII) / Renminbi QFII (RQFII), pension funds, social security funds and private funds
"Green" certification	Not required	Assessment by third-party certifying institution is encouraged but not mandatory	
Listing/trading venue	CIBM (spot trading only)		SSE or SZSE / NEEQ / OTC market at securities companies
Clearing house	CCDC for registration, custody, clearing and settlement, and cash payment		CSDC for listed ABS

Table 2. Key features of major types of green ABS in Mainland China

Feature	Credit ABS	Enterprise ABN	Corporate ABS
Information disclosure requirements	<p>(1) 5 working days (WDs) prior to issuance:</p> <ul style="list-style-type: none"> • Issue document • Issue method • List of underwriters • Credit rating report <p>(2) After issuance:</p> <ul style="list-style-type: none"> • Entrusted institution's report on base assets and payments of ABS (each payment term and annually) • Credit rating report (annually) • Price-sensitive information 	<p>(1) Pre-issuance:</p> <ul style="list-style-type: none"> • Issue document, legal advice and credit rating report for public offering <p>(2) After issuance:</p> <ul style="list-style-type: none"> • Base asset operation report (each payment term and annually; plus half-yearly for publicly offered ABSs) • Half-year and annual disclosure on use of proceeds and progress of green project(s) • Annual and irregular credit rating report • Price-sensitive information 	<p>(1) Pre-issuance:</p> <ul style="list-style-type: none"> • Issue document on details of product and base asset, product issue details, credit rating report (if any), registration/custody/trading venues, risk disclosure, etc. <p>(2) After issuance:</p> <ul style="list-style-type: none"> • Annual base asset management report • Annual base asset custody report • Disclosure on use of proceeds, progress of green projects and environmental efficiency • Annual and irregular credit rating report (if any) • Report on distribution of payouts (each payment term) • Price-sensitive information
Information disclosure platform	<ul style="list-style-type: none"> • Websites of Chinabond and Chinamoney (CFETS) • No dedicated segment for green securities yet 	<ul style="list-style-type: none"> • Websites of Chinamoney (CFETS) and Shanghai Clearing House • No dedicated segment for green securities yet 	<ul style="list-style-type: none"> • "Green securities" webpage on SSE website for SSE-listed ones; • SZSE website (no dedicated webpage yet) for SZSE-listed ones • Website(s) specified by AMAC for ABSs not listed on exchanges

Note: Where no specific regulatory provisions are found for the type of green ABS, information from the rules and regulations applicable to the corresponding type of security is given. The information in the table is selected key information, which is not exclusive.

Source: Related rules and regulations issued by the regulators (see Appendix).

Since the first labelled green ABS was issued in January 2016, there have been 446 green ABSs issued with a total issue amount of RMB 118.0 billion up to 2020 (see Figure 5):

- Green credit ABSs accounted for 14% by issue amount and 5% by number. The first labelled (in compliance with Mainland green definitions) green credit ABS in the Mainland was issued on the CIBM in January 2016¹⁹, the base asset of which was green corporate loans originally owned by a bank²⁰. This ABS has 3 tranches with different seniorities of repayment.
- Green enterprise ABNs accounted for 32% by issue amount and 17% by number. The first labelled green enterprise ABN was issued in the CIBM in April 2017, the base asset

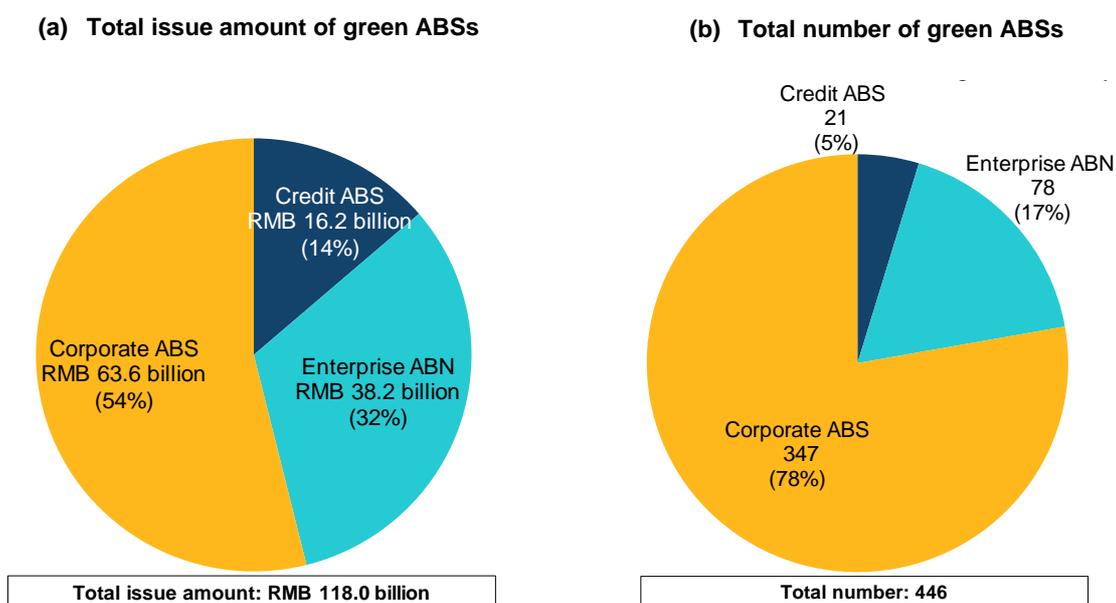
¹⁹ Prior to this, there was another green credit ABS issued by China Industrial Bank (CIB) in September 2014 and the base asset of which is a pool of green loans classified using its own green definitions, which may not comply with the authorities' green definitions. See "First green credit ABS in the Mainland was issued successfully" (〈國內首單綠色金融信貸資產支持證券成功發行〉), published on *financialnews.com.cn*, 18 September 2014.

²⁰ The original asset owner was CIB and the base asset is a pool of green loans classified according to the PBOC's Green Bond Endorsed Project Catalogue 2015 and the former CBRC's green loan definitions. See "CIB issued the first green credit ABS in 2016 in the Mainland" (〈興業銀行發行 2016 年國內首單綠色信貸資產支持證券〉), published on *financialnews.com.cn*, 7 January 2016.

of which was debt receivables of green water projects²¹. This ABN has 7 tranches with different seniorities of repayment.

- Green corporate ABSs dominated in terms of both issue amount (54% of total) and number of issues (78% of total). The first unlabelled green corporate ABS was issued in July 2006 as mentioned in Section 1 and the first labelled green corporate ABS was issued on the SSE in July 2017, the base asset of which was beneficiary rights of fees from green wind projects. The original asset owner was one of the largest wind turbine manufacturers in China (“Goldwind”), i.e. an enterprise belonging to green industries. This ABS had 2 tranches with different seniorities of repayment.

Figure 5. Total issue amount and number of green ABSs in the Mainland by type (2016 – 2020)



Note: Green ABSs include those classified as “green ABS” according to Wind’s definition and those explicitly named as a green ABS.

Source: Wind.

3. GROWTH PROSPECTS

The growth of the Mainland green ABS market is expected to be further stimulated by supportive market policies and the increasing market demand from both the issuer and investor sides that is driven by the Central Government’s promotional policies on “green industries” on the backdrop of the global ESG trend.

China is the first country in the world to issue a systematic green finance policy framework in 2016²². A number of supportive fiscal, monetary and regulatory policies for green finance were issued subsequently. These include initiatives to encourage green bank loans and the issuance of green bonds by incentive measures, and to build up a supportive environment by introducing policies and regulations in areas such as information disclosure, credit rating and third-party assessment or certification. In respect of ABS as a new innovative kind of financing instrument, specific supportive policy and regulatory measures were introduced since its pilot

²¹ The original asset owner was Beijing Enterprises Water.

²² Source: *Guiding Opinions About Construction of Green Financial System* (《關於構建綠色金融體系的指導意見》), issued by the PBOC, Ministry of Finance, NDRC, Ministry of Environmental Protection, CBRC, CSRC and CIRC (CBRC and CIRC was restructured into CBIRC), 31 August 2016.

introduction in 2005²³. In particular, ABS products traded on the CIBM and exchanges are excluded from the regulatory restrictions stipulated in the policy document regarding the reform of asset management businesses of financial institutions²⁴ implemented in April 2018, since these are considered “standardised” assets. This is conducive to the continuous growth in the Mainland ABS market.

In respect of promoting “green industries”, China has been actively delivering its commitments as a signatory country to the Paris Agreement within the United Nations Framework Convention on Climate Change (UNFCCC), dealing with greenhouse-gas-emissions mitigation, adaptation and finance, signed in 2016. The State Council issued in December 2017 the “Plan on Reform in a Compensation System for Damaging the Ecosystem, which is implemented nation-wide from 1 January 2018. In addition, eco-culture has been incorporated into the Memorandum of the Chinese Communist Party and the Constitution of the People’s Republic of China²⁵.

At the United Nations General Assembly Session in September 2020, the Chinese President Xi Jinping announced the goals to have carbon dioxide emissions peaked before 2030 and to achieve carbon neutrality by 2060²⁶. These are supported by the policy initiatives outlined in the 14th 5-Year Plan released in November 2020 and the Government Work Report delivered by Premier Li Keqiang at the fourth session of the 13th National People’s Congress in March 2021²⁷. The main targets of development for 2021 related to achieve carbon neutrality include further improvement in the environment, cutting around 3% in energy consumption per unit of gross domestic products and continued reduction in the discharge of major pollutants.

The number of green projects during the action period to achieve the year 2030 and year 2060 goals is expected to increase and the demand for green financing will also increase. While big enterprises in different industrial sectors may be relatively easy to obtain direct or indirect financing for their investments (whether green or not), the financing problem of small and medium-sized enterprises (SMEs), especially those in the private sector, has been a pain-point in the economic development of Mainland China. Because of their small business scale and possibly unrecognised credibility, SMEs are often difficult to obtain financing through bank loans or equity fund-raising. The funding structure of ABSs, which can pool small assets together, enables SMEs and small-scale investments to gain financing, and this applies to small-scale green investments financed through green ABS as well²⁸. The practice of this was more or less reflected in the smaller average issue size of green ABSs compared to other green bonds, especially for green corporate ABSs (representing more of the private corporate sector) — RMB 165 million for green corporate ABS, RMB 580 million for green enterprise ABN and RMB 931 million for green credit ABS in 2019, compared to RMB1.55 billion for other green bonds²⁹. A broad inclusion in the ABS market of small issuers seeking financing for

²³ Source: *Q&A on Knowledge of Asset Securitisation Business* (《資產證券化業務知識問答》), issued by the CSRC, 1 December 2017.

²⁴ Source: *Guiding Opinions About Regularising Asset Management Businesses of Financial Institutions* (《關於規範金融機構資產管理業務的指導意見》), issued by the PBOC, CBIRC, CSRC and State Administration of Foreign Exchange (SAFE), 27 April 2018.

²⁵ Source: *China Green Finance Development Report (2018)* (《中國綠色金融發展報告 (2018)》), published on the PBOC’s website, 20 November 2019.

²⁶ Source: “Enhance solidarity’ to fight COVID-19, Chinese President urges, also pledges carbon neutrality by 2060”, news release on the United Nations’ website, 22 September 2020.

²⁷ Source: *Chinese Communist Party Outlines Recommendations for Economic Targets in 14th Five-Year Plan, 2035 Vision* (《中共中央關於制定國民經濟和社會發展第十四個五年規劃和二〇三五年遠景目標的建議》), published on the Chinese Central Government’s website, 3 November 2020; “Full Text: Report on the Work of the Government” and “Highlights from Government Work Report”, published on the State Council’s website, 13 March 2021.

²⁸ See *China Green Bond Market 2019 Research Report*, produced by the CBI and CCDC Research and funded by HSBC, published on the CBI’s website, 25 June 2020.

²⁹ Calculated from the data available from Wind.

their green projects, which otherwise might be blocked from the finance market, is expected to contribute to the further growth of green ABSs.

Given the proactive policy support, the growth momentum of green ABS issuance in the Mainland has been strong in the past few years. Despite the slow-down in 2020 due to the COVID-19 pandemic situation (see Section 1), it is expected that the growth momentum will revive in the way forward.

Currently, the development of green ABSs in China faces a number of challenges, including the harmonisation of green definitions of financing/investment products, the dominance of green loans in the Mainland, the relatively low trading share of ABSs, the restricted scope of investor base and limited product development. Nevertheless, continuous efforts are being devoted to address these challenges and to provide a more favourable nurturing ground for the future development of the Mainland green ABS market, as discussed below.

- (1) The green definitions in the Mainland vary across the different types of green ABS but are being harmonised.** There are currently no specific rules and regulations on green credit ABSs. Besides, there are two sets of green loans reporting standards issued by the former CBRC and the PBOC respectively, although they have the same 12 main categories. These standards may not fully align with the PBOC Catalogue for green bond classification, which is adopted by green enterprise ABNs and green corporate ABSs for the classification of their base assets. Nevertheless, the CBIRC and the PBOC were reportedly putting efforts in revising their reporting standards to align with the “Green Industry Catalogue 2019”³⁰. As mentioned in Section 2.1, the definition of green projects is now unified upon the release of Green Bond Endorsed Project Catalogue 2021. This is expected to contribute to lowering the cost of green bond issuance and improving the pricing efficiency. Besides, the main categories in Green Bond Endorsed Project Catalogue 2021, and its exclusion of the sectors of clean coal and other fossil fuels, are consistent with recognised international standards for green bonds. These would facilitate the Mainland green bond sector to integrate with the international market.
- (2) Green loans provide a big potential for green ABSs to become more popular in the Mainland.** As of the end of 2020, the outstanding amount of green loans reached RMB 12.0 trillion³¹. In comparison, the outstanding amount of green ABSs was only RMB 93.5 billion, less than 1% of that of green loans and 8.7% of that of green bonds (RMB 1.08 trillion)³². If more green loans in the Mainland are to be securitised as green credit ABSs, it would contribute a big potential growth in green ABSs. The instrumental drivers of this would include further standardisation of green loan definitions, enhancements of disclosure and policy incentives³³.
- (3) The slow-down in listing and trading activities of green ABSs in 2020 is expected to be temporary.** During 2016 to 2020, compared to other green bonds, the total number of new issues of green ABSs on CIBM and exchanges was relatively smaller and suffered a setback in 2020 under the pandemic situation while other green bonds still had growth in the year (though at a lower rate than in the previous year) (see Figure 6). It is reported that the pandemic-themed bond issuance by Mainland enterprises reached 620 bonds with

³⁰ Source: “Brief analysis on the policy and statistical framework on green credit in China”(〈淺析中國綠色信貸政策與統計制度〉), *sohu.com*, 10 November 2019.

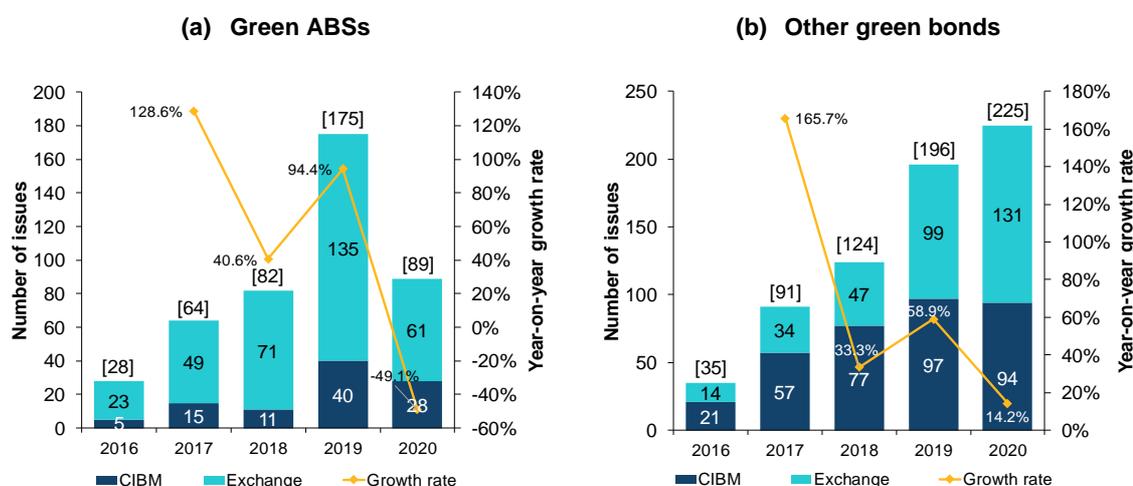
³¹ Source: “Report on the use of loans of financial institutions in 2020”(〈2020年金融機構貸款投向統計報告〉), published on the website of the PBOC, 29 January 2021.

³² Source: Wind.

³³ See “Lu Zhengwei: Study on the framework of facilitating the development of green credit ABS”(〈魯政委：促進綠色信貸資產證券化發展的制度研究〉), *chinacef.cn*, 16 May 2020.

a total amount of RMB 450.9 billion during 1 January to 8 September 2020³⁴ and the new loans to micro and small enterprises increased by more than 50% to RMB 2.3 trillion during March to September 2020, compared to the same period in the previous year³⁵. As a result, under the pandemic situation, market demand has been diverted to the issuance of non-green bonds addressing social and healthcare, and therefore the financing mode of SMEs which are expectedly more inclined to have used ABSs for financing might have changed (see Section 1). Nevertheless, the Green Bond Endorsed Project Catalogue 2021 is expected to strongly support the issuance of green bonds, including green ABSs. Besides, a new special type of ABN — Asset-Backed Commercial Paper (ABCP) — on the CIBM was introduced in June 2020 to support the financing of receivables in the supply chain of micro and small enterprises³⁶.

Figure 6. The number of newly issued green ABSs and other green bonds by listing on CIBM and exchanges venue (2016 – 2020)



Note: Green ABSs include those classified as “green ABS” according to Wind’s definition and those explicitly named as a green ABS.

Source: Wind.

In respect of trading, the average daily turnover (ADT) of green ABSs rose in recent years and reached RMB 31.1 billion in 2020, with a turnover ratio (as measured by ADT divided by period-end outstanding amount) of less than 0.1% (see Figure 7a)³⁷. In comparison, other green bonds had relatively more active trading (see Figure 7b). Such difference may, to a certain extent, owe to the restricted eligible investor base of ABSs (see below). Nevertheless, the long-term growth prospects would be positive for green ABSs, upon economic recovery from the pandemic.

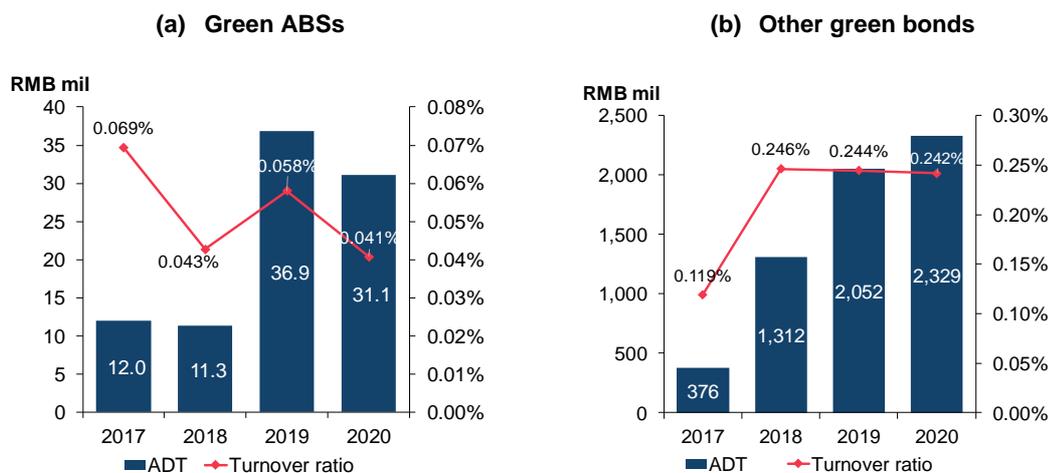
³⁴ Source: “The number of newly issued pandemic-themed bonds has already reached 620 bonds with an amount exceeding RMB450.9 billion so far this year” (〈疫情防控債年內已發行 620 隻 規模逾 4509 億〉), published on *sina.com*, 9 September 2020.

³⁵ Source: “Confirmed! The financial supportive measures for millions of micro and small enterprises will not stop!” (〈定了! 給數百萬戶小微企業的金融「及時雨」不會停!〉), published on the website of the Chinese Central Government, 23 December 2020.

³⁶ See “NAFMII introduced ABCP to serve the diversified financing needs of bond market” (〈交易商協會創新推出 ABCP 服務債券市場多元化投融資需求〉), published on the NAFMII’s website, 2 June 2020; “2020H1 report on the development of asset securitisation” (〈2020 年上半年資產證券化發展報告〉), published on the website of AMAC, July 2020.

³⁷ Source: Wind. The turnover ratios vary across types of green ABS during the period — 0.13% for green credit ABSs, 0.09% for green enterprise ABNs and 0.005% for green corporate ABSs.

Figure 7. ADT and turnover ratio of green ABSs and other green bonds in the Mainland market (2017 – 2020)



Note: Green ABSs include those classified as “green ABS” according to Wind’s definition and those explicitly named as a green ABS. Trading figures were those on CIBM and exchanges combined.

Source: Wind.

(4) More product development will support the growth of liquidity and investor base. In contrast to other green bonds which are more opened to public investors³⁸, green ABSs are subject to a restricted scope of eligible investors (limited to qualified institutional investors only) and on the number of investors for each issue (capped at 200). The authorities have made efforts to widen the investor base of green ABSs, which include the expansion of investment scope from credit ABSs to ABNs and corporate ABSs for insurance asset management products since March 2020³⁹. However, retail investors are currently barred from direct access to ABSs. Green investment instruments like exchange traded funds (ETFs) on green underlying assets such as green bond indices that could help facilitate retail investor participation are not yet available in the Mainland market. On the contrary, there is one ETF listed on 27 February 2019 in the Taiwanese market tracking a Mainland green bond index⁴⁰. Nevertheless, it was reported that the growth of ESG mutual funds in China grew steadily in 2020 — as of end-November 2020, there were 27 ESG mutual funds with positive screening (selecting best-in-class securities) and 31% of them were launched in 2020, including two mutual funds investing in green bonds only; and 47 ESG bank wealth management products (mainly investing in green bonds and green ABSs) which are targeting retail investors, and more than 60% of them were issued in 2020⁴¹. Innovative product development relating to green bonds and green ABSs would be conducive to further growth in the market segment.

4. POSSIBLE SUPPORT OFFERED BY THE HONG KONG MARKET

Underpinned by policy incentives and market demand, green finance is expected to grow further in the Mainland and more green financing channels are needed. Green loans and green bonds have been the key financing channels for large business corporations while

³⁸ In the Mainland, ABSs are issued to qualified investors only but other green bonds (e.g. green corporate bonds) can be issued either to qualified investors only or to both public and qualified investors.

³⁹ Source: *Interim Measures for the Management of Insurance Asset Management Products* (《保險資產管理產品管理暫行辦法》), issued by CBIRC, 25 March 2020.

⁴⁰ See “First ETF on Chinabond green bond index listed on TWSE” (〈首隻含綠債中債指數ETF基金在臺灣證交所上市〉), *xinhua08.com*, 1 March 2019.

⁴¹ Source: China Social Investment Forum. “China sustainable investment review 2020”, published on the website of Syntao Green Finance, December 2020.

green ABSs, a special kind of green bond, can serve also SMEs and small-scale green projects. Hong Kong has been an offshore financing centre for Mainland enterprises and could play a contributive role in supporting green finance in the Mainland.

In the Hong Kong market, the development of green and sustainable finance is strongly supported by the authorities. In November 2020, the Hong Kong Special Administrative Region (HKSAR) Chief Executive announced in her 2020 Policy Address that Hong Kong will strive to achieve carbon neutrality before 2050⁴². The Policy Address also mentioned the progress of meeting the targets of decarbonisation outlined in the Government's "Hong Kong's Climate Action Plan 2030+" (published in 2017), which will be updated in mid-2021 to set out more proactive strategies and measures to reduce carbon emissions. According to the 2021-22 Budget released in February 2021⁴³, the Hong Kong Government will continue to support the development of green and sustainable finance. The support will include issuing green bonds regularly under the expanded Government Green Bond Programme of HK\$200 billion and consolidating two existing grant schemes into a Green and Sustainable Finance Grant Scheme to provide subsidy for eligible bond issuers and loan borrowers to cover their expenses on bond issuance and external review services. In May 2020, the Green and Sustainable Finance Cross-Agency Steering Group of seven agencies was established⁴⁴. The Steering Group will provide strategic direction with a focus on regulatory and market developments to bolster Hong Kong's position as a leading green and sustainable finance centre in Asia and globally, and will facilitate regional cooperation, including in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA)⁴⁵. The Steering Group announced its Strategic Plan with six key focus areas for longer term development and agreed to implement five near-term action points in December 2020⁴⁶. Furthermore, the issuance of green investment products, including green bonds, is facilitated by the set of harmonised green definitions compiled by the Hong Kong Quality Assurance Agency (HKQAA) for green labelling. Green bond issuers (including those of green ABSs) in Hong Kong can also benefit from government subsidies for obtaining green certification from the HKQAA and for first-time issuers to issue and list their bonds in Hong Kong⁴⁷. As of the end of 2020, there were 56 green or ESG-related bonds listed on the Stock Exchange of Hong Kong (SEHK) with the cumulative issuance size amounting to HK\$213.9 billion⁴⁸. The number of listings and amount of issuance size have been on an increasing trend over the past five years — from three listings and HK\$10.3 billion in 2016 to 18 listings and HK\$66.6 billion in 2020⁴⁹; However, there were no green ABSs listed on SEHK yet.

Where the implications of green and sustainable finance extend beyond local markets, Hong Kong also seeks to take up cross-border roles and opportunities. The Guangdong-Hong Kong-Macao Greater Bay Area Green Finance Alliance (GBA-GFA) was established in September 2020 to promote research and incubating green investments in the GBA. This is a collaboration between the Hong Kong Green Finance Association (HKGFA), the Green Finance Committee of Guangdong Society for Finance and Banking (GDGFC), the Green Finance Committee of Financial Society of Shenzhen Special Economic Zone (SZGFC), and

⁴² Source: *The Chief Executive's 2020 Policy Address*, published by the Hong Kong SAR Government, 25 November 2020.

⁴³ *2021-22 Budget Speech*, issued by the Hong Kong Government, 24 February 2021.

⁴⁴ The Steering Group was initiated by the Hong Kong Monetary Authority (HKMA) and the Securities and Futures Commission (SFC). Other members are the Environment Bureau, the Financial Services and the Treasury Bureau, HKEX, the Insurance Authority and the Mandatory Provident Fund Schemes Authority.

⁴⁵ Source: "Joint statement on the establishment of the Green and Sustainable Finance Cross-Agency Steering Group", press release published on the HKMA's website, 5 May 2020.

⁴⁶ Source: "Cross-Agency Steering Group launches its Strategic Plan to strengthen Hong Kong's financial ecosystem to support a greener and more sustainable futures", press release published on the HKMA's website, 17 December 2020.

⁴⁷ These subsidies include Pilot Bond Grant Scheme (PBGS) and Green Bond Grant Scheme (GBGS).

⁴⁸ Source: "Sustainable, green and social product repository", HKEX Sustainable Finance — Sustainable & Green Exchange (STAGE)'s website, viewed on 31 December 2020.

⁴⁹ Source: HKEX.

the Macau Association of Banks. The GBA-GFA is already supporting five green finance-related projects: the Green Building Project, Blockchain Solar Project and Carbon Connect Project to be led by Hong Kong; the Research and Practical of Solid Waste Disposal Project to be led by Shenzhen; and the Green Supply Chain Financing Action Guide Project to be led by Guangdong⁵⁰.

In the global market, there had been a strong recovery of asset securitisation with a better risk management regime in recent years. The market demand for securitisation once slowed down in view of the understated risks of subprime mortgages in the US that was alleged to have triggered the global financial crisis in 2008. Nevertheless, the post-crisis changes in regulations and risk awareness contribute to improvements in governance and transparency, resulting in a recovery of market demand with better-quality securitisation pools⁵¹. The securitisation has become an important financing source for SMEs and infrastructure projects. The issue amount of asset securitisation (or structured finance) grew steadily during 2015 to 2019 to a 5-year high at about US\$1.15 trillion in 2019⁵². Despite the impact of the Covid-19 pandemic, the issue amount only eased slightly to US\$1.07 trillion in 2020 owing to the increase of issuance in Mainland China and was expected to rebound in 2021⁵³. As Hong Kong is a global financial centre, market participants have been exploring opportunities to develop Hong Kong into a securitisation financing hub for infrastructure and SMEs in local, regional and global economies⁵⁴. In fact, Hong Kong Mortgage Corporation (HKMC) established Bauhinia MBS Limited in 2005 for the issuance of mortgage-backed securities and commenced its infrastructure financing and securitisation business in 2019⁵⁵. These projects may include green projects of the “Belt and Road” initiative (BRI) and in GBA undertaken by Mainland and/or offshore business corporations. The development of the green ABS market in Hong Kong could strengthen the support offered to global and Mainland issuers for financing their green projects.

Serving the burgeoning green finance and securitisation market segment, the Hong Kong market offers an efficient and robust market, in particular the exchange platform with continuous enhancements to support the listing, trading and product development of various Mainland onshore green finance and investment vehicles, including green ABSs. Possible enhanced support would include the following:

(1) Offshore issuance, listing and trading

Hong Kong has been the largest offshore bond financing centre for Mainland issuers⁵⁶. Mainland issuers can securitise their offshore green assets to issue and list green ABSs in Hong Kong. These offshore green assets may be denominated in RMB or USD and may

⁵⁰ Source: “Greater Bay Area Green Finance Alliance officially launched today”, published on the website of HKGFA, 5 September 2020.

⁵¹ See “Ten years after the financial crisis, global securitisation lending transformed by regulation and economic growth”, published on the website of S&P Global, 21 July 2017.

⁵² These include ABS, commercial mortgage-backed securities, collateralised loan obligations and residential mortgage-backed securities. Source: “Global structured finance outlook 2020: another \$1 trillion-plus year on tap”, published on the S&P’s website, 6 January 2020.

⁵³ See “Global structured finance 2021 outlook: market resilience could bring over \$1 trillion in new issuance”, published on the S&P’s website, 8 January 2021.

⁵⁴ See Asian Academy of International Law, Asia-Pacific Structured Finance Association and Hong Kong Institute of Bankers (HKIB), “Hong Kong — a securitisation financing hub for infrastructure and small and medium enterprises”, published on the website of HKIB, 13 January 2020.

⁵⁵ The issuance of ABSs fell sharply in the global market after the global financial crisis in 2008, but the post-crisis changes in regulations contributed to better quality of the base asset pool, which supported the revival of market demand for ABSs in recent years. See “Ten years after the financial crisis, global securitisation lending transformed by regulation and economic growth”, published on the website of S&P Global, 21 July 2017; see also *Mortgage-Backed securitisation and Infrastructure Financing and Securitisation*, webpages on the HKMC’s website, viewed on 5 January 2021.

⁵⁶ See HKEX research report, “Hong Kong’s role in supporting the fund-raising of Mainland private enterprises”, published on the HKEX website, 13 June 2019.

cover offshore green loans and infrastructure investments to support the BRI and the development of GBA. Offshore green ABSs can be listed in Hong Kong under Chapter 37 of Main Board Listing Rules (MBLR) for issuance to professional investors globally and under Chapters 22 to 36 of MBLR for issuance to public and professional investors.

(2) Improvement in transparency to offshore investors

The introduction of a dedicated green bond segment would be useful for the information disclosure of green bonds, to differentiate them from traditional bonds so as to facilitate investment in them. Currently, under cooperative agreements between the parties, information on certain eligible Mainland green bonds on the CIBM, SSE and SZSE can be displayed on the Luxembourg Green Exchange (LGX) if they meet the listing requirements of LGX⁵⁷. In the Hong Kong market, the Primary Market Information Platform (PMIP) of Bond Connect Company Limited (BCCL), the joint venture of HKEX and CFETS, serves to improve the transparency of onshore bonds on the CIBM, which include green ABSs, to offshore investors with the information displayed in English. This platform may be enhanced to support the separate/differentiated disclosure of onshore green bonds and ABSs on the CIBM. In addition, the dedicated multi-asset platform for sustainable investment products launched by HKEX in December 2020 — Sustainable and Green Exchange (STAGE) — may offer support to the Mainland's green products.

(3) Onshore liquidity and offshore access

Foreign investors can already access the primary and secondary markets of bonds on the CIBM through Northbound Bond Connect. This can support the liquidity of green ABSs on the CIBM. The onshore liquidity of green ABSs on exchanges may also be improved by potential expansion of market connectivity to include listed bonds such that offshore investors may trade listed bonds (including green ABSs) on the Mainland exchange market. In a policy document issued by the CSRC in 2017⁵⁸, the CSRC stated clearly that in exploring onshore and offshore exchange market connectivity, priority will be given to inclusion of green corporate bonds. As mentioned in the Securities and Futures Commission (SFC)'s 2019-2020 annual report, the CSRC and the SFC are working towards introducing other Connect programmes beginning with a new initiative for the cross-border trading of listed bonds. In particular for offshore access, according to Hong Kong's 2021-22 Budget⁵⁹, the Hong Kong Monetary Authority (HKMA) and the PBOC have set up a working group to drive the initiative of Southbound trading of Bond Connect, with the target of launching it within 2021. This onshore-offshore market connectivity will contribute to enhancing the liquidity of green ABSs in both the Mainland and Hong Kong markets.

(4) ETFs and other product development

Tax savings to ETF investors in Hong Kong on interest income from Mainland corporate bonds is a competitive factor to support related product development, compared to other major markets⁶⁰. Riding on this advantage, the development of indices on Mainland green bonds and of ETFs in Hong Kong tracking these indices should be encouraged and supported. As ETFs have become attractive investment instruments for both institutional

⁵⁷ As of 22 April 2021, 19 green bonds from the SSE, 1 from the SZSE and 56 from CIBM were displayed on LGX (none of them was green ABS). See "Chinese domestic green bond channel" and "Chinese domestic green bonds traded on CIBM", webpages on LGX's website, viewed on 22 April 2021.

⁵⁸ *Guiding Opinions on the Development of Green Bonds* (《關於支持綠色債券發展的指導意見》), issued by the CSRC, 4 July 2017.

⁵⁹ *2021-22 Budget Speech*, issued by the Hong Kong Government, 24 February 2021.

⁶⁰ Source: "ETF taxation report for investors 2019: Hong Kong", prepared by Ernst and Young for HKEX, published on HKEX's website, 22 October 2019.

investors and the general public, this could help increase the investor participation in green bonds and ABSs.

5. CONCLUSION

Green ABSs become a new growth engine in the Mainland green bond market for facilitating the financing of various types of green projects in China, particularly green infrastructure projects. The long-term growth of the Mainland green ABS market is expected to continue. Serving the burgeoning green finance and securitisation in China, Hong Kong offers an efficient and robust market, in particular the exchange platform to support the further growth. These possible support include the offshore issuance and trading of green ABSs issued by Mainland issuers through the Hong Kong market, enhancing information transparency through dedicated platforms, supporting onshore liquidity and offshore access, and facilitating related product development. Global, regional and local issuers are expected to benefit from these means of support for their financing of green projects for BRI and GBA. A well-supported green ABS market would in the end contribute to the mobilisation of private capital for the sustainable economic activities in the Mainland and Hong Kong.

APPENDIX. KEY RULES AND REGULATIONS GOVERNING GREEN ABS

English name	Chinese name	Issuing authorities	Issue date/ latest version date
(1) Macro-level			
Company Law	公司法	PRC	26/10/2018
Securities Law	證券法	PRC	31/12/2019
Securities Investment Fund Law	證券投資基金法	PRC	24/04/2015
Rules on Determination of Standardised Credit Assets	標準化債權類資產認定規則	PBOC, CBIRC, CSRC and State Administration of Foreign Exchange (SAFE)	03/07/2020
(2) Investor eligibility			
Notice of PBOC [2016] No.8 on the Related Issues — Eligibility of Qualified Institutional Investors in the CIBM	中國人民銀行公告[2016]第 8 號 —— 合格機構投資者進入銀行間債券市場有關事項	PBOC	27/04/2016
SSE Administrative Measures on Bond Market Investor Suitability (2017 Revision)	上海證券交易所債券市場投資者適當性管理辦法 (2017 年修訂)	SSE	28/06/2017
SZSE Administrative Measures on Bond Market Investor Suitability	深圳證券交易所債券市場投資者適當性管理辦法	SZSE	Effective 01/07/2017
(3) Green bonds			
Guidelines on the Issuance of Green Bonds	綠色債券發行指引	NDRC	31/12/2015
SSE Announcement on the Pilot Scheme of Green Corporate Bonds	上海證券交易所關於開展綠色公司債券試點的通知	SSE	16/03/2016
SZSE Announcement on the Pilot Scheme of Green Corporate Bonds	深圳證券交易所關於開展綠色公司債券試點的通知	SZSE	22/04/2016
CSRC Announcement [2017] No.6 — Guiding Opinions on the Development of Green Bonds	中國證監會公告[2017]6 號 —— 關於支持綠色債券發展的指導意見	CSRC	02/03/2017
PBOC & CSRC Announcement (2017) No.20 — Guidelines on the Behaviour of Green Bond Assessment and Certification (Provisional)	中國人民銀行中國證監會公告[2017] 20 號 —— 綠色債券評估認證行為指引 (暫行)	PBOC and CSRC	13/12/2017
SSE Q&As on Corporate Bond Financing (1) — Green Corporate Bonds	上海證券交易所公司債券融資監管問答(一) —— 綠色公司債券	SSE	23/03/2018
SSE Guidelines on Review and Approval of Corporate Bond Issuance and Listing No.2 — Specific Types of Corporate Bond	上海證券交易所公司債券發行上市審核規則適用指引第 2 號 —— 特定品種公司債券	SSE	27/11/2020
SZSE Business Guidelines on Innovative Types of Corporate Bond No.1 — Green Corporate Bonds	深圳證券交易所公司債券創新品種業務指引第 1 號 —— 綠色公司債券	SZSE	27/11/2020
(4) ABS			
Notice on Related Issues on the Investment of Securities Investment Funds in ABS (for credit ABSs and corporate ABSs only)	關於證券投資基金投資資產支持證券有關事項的通知 (for credit ABSs and corporate ABSs only)	CSRC	14/05/2006

English name	Chinese name	Issuing authorities	Issue date/ latest version date
(a) Credit ABS			
Administrative Measures on Pilot Scheme of Credit Asset Securitisation	信貸資產證券化試點管理辦法	PBOC and CBRC	20/04/2005
Rules on Information Disclosure of ABS	資產支持證券信息披露規則	PBOC	13/06/2005
Notice on Related Issues on the Registration, Custody, Trading, Clearing and Settlement of ABSs in the CIBM	資產支持證券在銀行間債券市場的登記、託管、交易和結算等有關事項公告	PBOC	15/06/2005
Operational Rules on Trading of ABSs	資產支持證券交易操作規則	CFETS	01/08/2005
Operational Rules on the Issuance, Registration, Custody, Clearing and Settlement of ABSs	資產支持證券發行登記與託管結算業務操作規則	CCDC	16/08/2005
Administrative Measures on Supervision of Pilot Scheme of Credit Asset Securitisation of Financial Institutions	金融機構信貸資產證券化試點監督管理辦法	CBRC	07/11/2005
Notice on Related Issues of Further Expanding the Pilot Scheme of Credit Asset Securitisation	關於進一步擴大信貸資產證券化試點有關事項的通知	CBRC	22/05/2012
Notice of PBOC and CBRC [2013] No.21 — Further Regularisation of Credit Asset Securitisation	中國人民銀行中國銀行業監督管理委員會公告[2013]第21號——進一步規範信貸資產證券化	PBOC and CBRC	31/12/2013
Notice on Processing Filing and Registration of Credit Asset Securitisation	關於信貸資產證券化備案登記工作流程的通知	CBRC	20/11/2014
(b) Enterprise ABN			
Notice Measures on Non-financial Debt Financing Instrument in the CIBM	銀行間債券市場非金融企業債務融資工具管理辦法	PBOC	09/04/2008
Notice on the Guidelines on Asset Backed Notes Issued by Non-financial Enterprises and Registration Forms for Public Offering of Asset Backed Notes Issued by Non-financial Enterprises	關於公佈《非金融企業資產支持票據指引》及《非金融企業資產支持票據公開發行註冊檔表格體系》的公告	NAFMII	09/10/2017
Rules on the Information Disclosure of Non-financial Enterprise Debt Financing Instruments on the CIBM	銀行間債券市場非金融企業債務融資工具信息披露規則	NAFMII	08/12/2017
(c) Corporate ABS			
Q&A on Knowledge of Asset Securitisation Business	資產證券化業務知識問答	CSRC	01/12/2017
Rules on Asset Securitisation Business of Securities Companies and Subsidiaries of Fund Management Companies	證券公司及基金管理公司子公司資產證券化業務管理規定	CSRC	19/11/2014
Guidelines on Information Disclosure of Asset Securitisation Business of Securities Companies and Subsidiaries of Fund Management Companies	證券公司及基金管理公司子公司資產證券化業務信息披露指引	CSRC	19/11/2014
Notice on Filing of Corporate ABS and Related Rules	關於發佈《資產支持專項計劃備案管理辦法》及配套規則的通知	AMAC	24/12/2014
(d) Corporate ABS on SSE			
SSE Guidelines on Asset Securitisation Business	上海證券交易所資產證券化業務指引	SSE	26/11/2014

English name	Chinese name	Issuing authorities	Issue date/ latest version date
SSE Guidelines on Confirmation of Listing Requirements of ABS	上海證券交易所資產支持證券掛牌條件確認業務指引	SSE	20/06/2017
SSE Q&A on Asset Securitisation Business (1)	上海證券交易所資產證券化業務問答(一)	SSE	23/03/2018
SSE Q&A on Asset Securitisation Business (3)	上海證券交易所資產證券化業務問答(三)	SSE	13/02/2019
(e) Corporate ABS on SZSE			
SZSE Guidelines on Asset Securitisation Business (2014 Revision)	深圳證券交易所資產證券化業務指引(2014年修訂)	SZSE	25/11/2014
SZSE Guidelines on Confirmation of Listing Requirements of ABSs	深圳證券交易所資產支持證券掛牌條件確認業務指引	SZSE	19/06/2017
SZSE Q&A on Asset Securitisation Business (May 2020 Revision)	深圳證券交易所資產證券化業務問答(2020年5月修訂)	SZSE	08/05/2020
(f) Corporate ABS on Inter-OTC System			
Administrative Measures on the Pilot Scheme of Inter-OTC System	機構間私募產品報價與服務系統管理辦法(試行)	SAC	15/08/2014
Notice on Guidelines on Pilot Scheme of Asset Securitisation Business in the Inter OTC	關於發佈《機構間私募產品報價與服務系統資產證券化業務指引(試行)》的通知	SAC	16/02/2015
(g) Insurance ABC			
Provisional Measures on the Administration of Asset-Backed Beneficiary Certificates	資產支持計劃業務管理暫行辦法	CIRC	25/08/2015
(5) Green definitions			
Notice on the Publication of Green Industry Guidance Catalogue (2019 Edition)	關於印發《綠色產業指導目錄(2019年版)》的通知	NDRC, PBOC and other authorities*	14/02/2019
* The Notice was jointly issued by NDRC, Ministry of Industry and Information Technology, Ministry of Natural Resources, Ministry of Ecology and Environment, Ministry of Housing and Urban-Rural Development, PBOC and National Energy Administration.			
(a) Green bonds			
Green Endorsed Project Catalogue (2015 Edition) (To be replaced by 2021 Edition)	綠色債券支持項目目錄(2015年版)	PBOC's China Green Finance Committee	22/12/2015
Notice on Consultation on the publication of Green Endorsed Project Catalogue (2020 Edition)	關於印發《綠色債券支持項目目錄(2020年版)》的通知(徵求意見稿)	PBOC, NDRC and CSRC	08/07/2020
Green Endorsed Project Catalogue (2021 Edition)	綠色債券支持項目目錄(2021年版)	PBOC, NDRC and CSRC	22/04/2021 (Effective 01/07/2021)
(b) Green loans			
Guidelines on Green Loans	綠色信貸指引(銀監發[2013]4號)	CBRC	29/01/2012
Notice on Reporting of Statistical Table on Green Credit	關於報送綠色信貸統計表的通知(銀監發[2013]185號)	CBRC	04/07/2013
Notice on Establishment of Special Statistical Framework For Green Loans	關於建立綠色貸款專項統計制度的通知(銀發[2018]10號)	PBOC	05/01/2018

English name	Chinese name	Issuing authorities	Issue date/ latest version date
Notice on Revision of Special Statistical Framework For Green Loans	關於修訂綠色貸款專項統計制度的通知	PBOC	27/12/2019
(6) Green ABS			
(a) Green credit ABS			
PBOC Announcement [2015] No.39 — Issuance of Green Financial Bonds	中國人民銀行公告[2015]第 39 號——綠色金融債券發行	PBOC	22/12/2015
(b) Green enterprise ABN			
Guidelines on Green Debt Financing Instruments Issued by Non-financial Enterprises	非金融企業綠色債務融資工具業務指引	NAFMII	22/03/2017
Notice on Supporting the Issuance of Green Debt Financing Instruments in Green Financial Reform and Innovation Pilot Zones	關於支持綠色金融改革創新試驗區發行綠色債務融資工具的通知	PBOC	13/05/2019
(c) Corporate ABS			
SSE Q&A on Asset Securitisation Business (2) — Green ABS	上海證券交易所資產證券化業務問答(二)——綠色資產支持證券	SSE	15/08/2018

Source: Websites of respective authorities.

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