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The Structure and Evolution of China's Green Finance Policy Instruments

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Abstract

China's green finance policy system consists of many separate measures, and most studies examine them one at a time. This paper describes the system as a whole. It asks which instruments the system contains and how their relative weight changed between the 2016 Guiding Opinions on Building a Green Financial System and 2025. The instruments are grouped into five categories: green credit, green bonds, green insurance, green funds and carbon finance. The description rests on three public sources: green loan statistics from the People's Bank of China, green bond issuance data from the Climate Bonds Initiative, and the text of the policy documents. Green loans grew faster than total loans over the period, and their share of total loans rose from 6.7% at end-2020 to 16.2% at end-2025. Green bond issuance peaked in 2022 within the period covered and was about 18% lower in 2024 than in 2023. Both patterns need to be read with care, because the green loan statistics were redefined in 2025 and the bond figures come from report editions with different database cut-off dates. Read together with the policy documents, the evidence suggests that direct financial support has been joined by project standards, institutional assessment and risk management requirements. Government direction, market development and risk control are used here as three organising ideas for interpreting that combination. The paper describes how the system is built and how it has changed; it does not estimate the effect of any single policy.

Keywords

Green Finance; Policy Instruments; Green Credit; Green Bonds; China

1. Introduction

Green finance policy in China does two things at the same time. One group of measures tries to move money towards activities that are treated as environmentally beneficial; another group tries to control the financial and environmental risks that arise when institutions lend and invest in those activities. Both are part of the subject of this paper. The starting point is the 2016 Guiding Opinions on Building a Green Financial System, which first set out the framework as a whole. The dual carbon goals announced in 2020 then changed the context in

which that framework operates, because they tied green finance explicitly to a national climate target.

The question this paper addresses is how the separate instruments fit together and whether their relative importance has changed. A chronological list of announcements cannot answer that question on its own, because it matters who uses each instrument, through which channel the money reaches borrowers or investors, and what published evidence exists about how large the instrument has become. The paper therefore combines three elements: a classification of the instruments, a timeline of the main policy documents, and the two market series that are publicly available. The result is a description of how the policy mix is structured, together with an account of what the available evidence can and cannot support.

2. Literature Review

The existing work that this paper builds on falls into three groups. The first group studies one instrument at a time and asks what that instrument did. Within this group, research on China's green credit policy finds that it changed the debt financing available to firms in heavily polluting industries (Liu, Wang, & Cai, 2019; Wang, Liu, Wu, & Cai, 2019)[8, 27]. Later studies report lower carbon emission intensity among manufacturing firms (Lee, Chang, & Wang, 2022)[7] and more green innovation among renewable energy firms (Long, Yang, & Liu, 2023)[9]. Work on green bonds asks what happens to the firms that issue them: one set of studies examines changes in issuers' behaviour and performance (Flammer, 2021)[5], and another examines how shareholders respond when a green bond is announced (Tang & Zhang, 2020)[26]. These studies are informative, but each is tied to a particular sample, a particular policy and a particular outcome. None of them measures the national policy framework as a whole.

The second group is about policy design rather than about a single instrument. A basic distinction in this literature is between rules that require an action and incentives that make an action more attractive; the two work through different channels and therefore affect decisions in different ways. Research on policy mixes goes further and treats a set of instruments as an object of study in its own right, asking how the instruments interact and how the mix develops over time (Rogge & Reichardt, 2016; Kern, Rogge, & Howlett, 2019)[25, 6]. That perspective is directly relevant to China, because several instruments can act on the same decision. A project may have to satisfy a catalogue standard before it is eligible, may then be supported by low-cost central bank funding, and may afterwards be counted in the assessment of the bank that provided the loan.

The third group consists of market and policy reports rather than academic articles. Reports published by the People's Bank of China and the Climate Bonds Initiative record how large the green loan and green bond markets have become and when

the main policy documents were issued. They supply the figures used in this paper, but they are descriptive publications: they do not try to separate the effect of a policy from everything else that was happening at the same time. The contribution of this paper is to bring the three groups together. It sets out what each instrument is for, places the main policy documents on a timeline, and reports what the published market data show for the period from 2016 to 2025. The claim is a modest one: a clear and organised description of the whole instrument set, rather than a discovery that earlier research overlooked the topic.

3. Policy Instrument Taxonomy

The policies discussed here are sorted into five groups according to the kind of financial activity they mainly support. Table 1 lists the five groups, the measures that belong to each of them, and the actors or activities they are aimed at. This classification is a working arrangement for the paper. It is not an official list, the groups overlap, and it is not intended to cover every green finance product in China.

The five groups are not separate boxes. Green credit is about bank lending; green bonds raise money by issuing debt securities; green insurance transfers risk; green funds pool equity capital; and carbon finance links financial transactions to emission reduction and to the carbon market. A single measure can belong to more than one group. The carbon reduction support facility is the clearest example: its purpose is to cut emissions, which places it under carbon finance, but it works by providing banks with low-cost funds for qualifying loans, which also makes it a form of green credit. For this reason the five groups are used to describe what each policy is trying to do. They are not five quantities that can be added together to give a total size for green finance.

Table 1. Green finance policy instruments

Instrument	Content	Targets
Green credit	Green loan standards, central bank relending support, bank assessment	Banks and firms
Green bonds	Eligible-project catalogue, labelling standards, disclosure	Issuers and investors
Green insurance	Environmental pollution liability insurance, green insurance products	Corporate risk
Green funds	Government guidance funds, green industry funds	Equity investment
Carbon finance	Emissions trading, carbon reduction support facility	Covered emitters

Note: The five categories are an analytical grouping of the main green finance instruments in China. They are neither mutually exclusive nor exhaustive.

The timeline begins with the framework document of 2016 (People's Bank of China et al., 2016)[21] and with the pilot zones set up in 2017 (People's Bank of China et al., 2017)[22]. After the dual carbon goals were announced in 2020, central planning for reaching them was set out the following year (CPC Central Committee and State Council, 2021)[4]. Three further measures followed in 2021: an updated catalogue of the projects that qualify for green bond support (People's Bank of China et al., 2021)[23] the establishment of a national emissions trading scheme (Ministry of

Ecology and Environment, 2020)[10], and the carbon reduction support facility, through which the central bank provides funds for eligible bank lending (People's Bank of China, 2021c)[15].

A second set of documents deals with how institutions carry green finance out. The banking and insurance regulator issued guidelines on how banks and insurers should manage environmental, social and governance risks (China Banking and Insurance Regulatory Commission, 2022)[1], and the central bank introduced an evaluation scheme that scores banks on their green finance business (People's Bank of China, 2021b)[14]. Two further measures widened the range of channels: the National Green Development Fund added a public equity channel for green investment (Ministry of Finance, 2020)[11], and guidance on green insurance set out how insurers should cover environmental risk and how they should invest their own funds (National Financial Regulatory Administration, 2024)[12]. The 2025 catalogue then extended the catalogue approach beyond green bonds to green financial products more generally (People's Bank of China et al., 2025)[24].

4. Data and Trends

Three kinds of material are used here. The green loan figures come from the People's Bank of China quarterly reports on the direction of bank lending, which cover the years 2020 to 2025 (People's Bank of China, 2021a, 2022, 2023, 2024, 2025)[13, 16–19]; the central bank's monetary policy report is used as an additional source for the 2025 figures (People's Bank of China, 2026)[20]. The green bond figures come from annual reports published by the Climate Bonds Initiative (Climate Bonds Initiative, 2022, 2025)[2, 3]. The policy documents are read as texts and arranged both by date and by the instrument they mainly address.

The two market series do not measure the same thing, and this matters for the way they can be used. A loan balance is a stock: it records how much is owed at a particular point in time. Annual bond issuance is a flow: it records how much was issued during a year. Because one is a stock and the other a flow, their levels cannot be compared directly, and the two series cannot be used to calculate what share of green finance belongs to each channel. There are two further complications. In the last year of the loan series the statistical definition of a green loan was revised, and the bond figures come from reports published at different times with different database cut-off dates. The tables therefore report what each source published; they are not a single, fully consistent dataset.

Table 2. China green loan balance, year-on-year growth

Year	2021	2022	2023	2024	2025
Growth (%)	33.0	38.5	36.5	21.7	20.2

Note: Year-on-year growth in the outstanding green loan balance, using People's Bank of China figures. The published balance reached RMB 44.8 trillion at end-2025, and the reported share of green loans in total loans rose from 6.7% at end-2020 to 16.2% at end-2025. The statistical definition of green loans was revised in 2025, so the final observation is not strictly comparable with the earlier ones.

Table 3. China green bond issuance, CBI-aligned

Year	2021	2022	2023	2024
Issuance (US$ billion)	68.2	87.8	84.1	68.9

Note: Annual green bond issuance on the Climate Bonds Initiative definition, taken from different editions of the CBI China reports. The 2022 figure has two published versions: US$85.4 billion, or RMB 575.2 billion, in the 2022 report, and a restated US$87.8 billion in later editions. The table uses the restated value so that 2022 is measured on the same basis as 2023 and 2024. Cumulative issuance reached about RMB 3.2 trillion by end-2024. Revisions to the underlying database and differences between report editions mean that the figures are not exactly comparable across years.

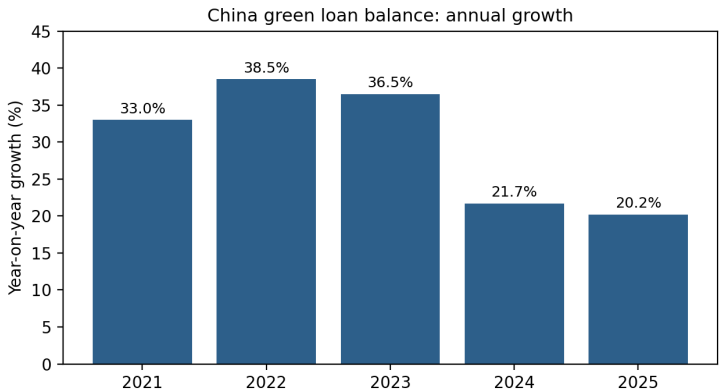


Figure 1. China green loan balance, annual growth

Note: Published year-on-year growth rates for outstanding green loans, 2021 to 2025. The 2025 observation uses a revised statistical definition of green loans.

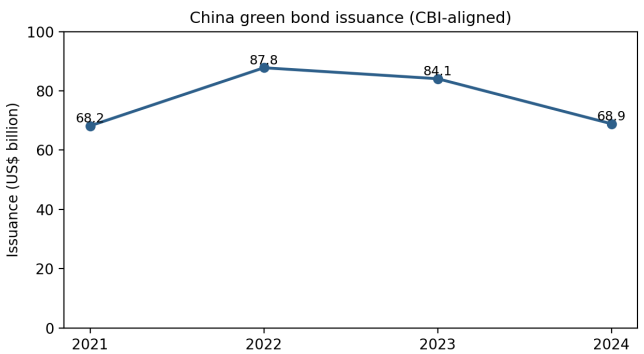


Figure 2. China green bond issuance, CBI-aligned

Note: Annual green bond issuance on the CBI definition, in US$ billion, 2021 to 2024. The values are those reported in the CBI editions used for Table 3.

The loan figures point to one clear pattern: the stock of green loans grew in every year shown, and the growth rate stayed in double digits throughout. Growth was fastest in 2022, at 38.5%, and then slowed steadily to 20.2% in 2025. It is worth being precise about what a slowdown means here. A lower growth rate is still growth, so the outstanding balance continued to rise even in the slowest year; what changed is the speed. Two cautions follow. First, because the definition of a green loan was revised for 2025, the last observation cannot be treated as a straightforward continuation of the earlier ones. Second, a falling growth rate is not

by itself evidence that the market has matured, since a slowing rate can also reflect the arithmetic of a larger base, weaker growth in bank lending generally, or the change in definition.

The share figures point in the same direction. Green loans made up 6.7% of total loans at the end of 2020 and 16.2% at the end of 2025, so the share of bank credit classified as green was much larger at the end of the period than at the start. This measure also has limits. It is a share of total loans, so it says nothing about how green finance is distributed across the rest of the financial system. The comparison also spans a change in statistical definition: the central bank revised the definition of a green loan with effect from 2025 and states that the 2025 figures are not comparable with the earlier ones, so the two endpoints are not measured on the same basis. The bond series moves differently: within the period covered, issuance was highest in 2022 and was about 18% lower in 2024 than in 2023. That fall describes bonds that meet the Climate Bonds Initiative's screening criteria, which depend on which projects count as eligible and on how much issuers disclose, and not only on how much money issuers wanted to raise.

Set side by side, the two series do not move in the same way: reported green lending expanded throughout, while issuance of CBI-aligned green bonds rose to a peak and then fell back. What the comparison does not show is equally important. It does not show that borrowers switched from bonds to bank loans, because the two series measure different things and cover different sets of issuers. Nor does it show that any particular policy produced either movement. Answering those questions would require financing measures that can be placed on the same footing, and a research design that separates the effect of policy from everything else that changed at the same time.

5. Evolution and Institutional Logic

Read in order, the policy documents show a change in the kind of instrument that dominates. Between 2016 and 2020 the emphasis was on building the framework: setting a general direction and allowing local experimentation. From 2021, and especially after the dual carbon goals, the documents become more specific. They define which projects qualify, they create funding facilities that institutions can draw on, and they require institutions to be assessed on their green finance business. This division into two periods is a way of organising the material; it is not a statistical result, and the paper does not test whether the two periods differ. The data cannot do that work: the loan series starts in 2020, so it says nothing about the earlier period, and neither series can show that the later policies caused the market to grow.

The first of the three organising ideas is government direction. In this setting it means that public authorities decide which activities count as green and set the rules that financial institutions work within. The project catalogues do the first job:

they list the activities that qualify for green credit or green bond support, so the boundary of the market is drawn by regulation rather than by the institutions themselves. Supervision and evaluation do the second job: once a bank's green finance business is assessed, green lending is no longer simply a matter of the bank's own commercial judgement. Government direction therefore works on both sides at once, deciding what may carry a green label and shaping how institutions are expected to manage that business.

The second idea is market cultivation, which concerns the channels through which money actually reaches projects. The three main channels described in this paper differ in kind: a bank loan creates a claim on the bank's balance sheet, a green bond raises money from investors, and a green fund provides equity. They can also be complementary rather than competing. A bank can issue a green bond, for example, and then lend the proceeds to eligible projects, in which case the same money passes through two of the channels in sequence. The existence of several channels does not prove that they work together smoothly in every case, and this paper does not test whether they do.

The third idea is risk control, and it explains why the growth of the market has been accompanied by more requirements for assessment and disclosure. A project can be environmentally beneficial and still be a poor loan or a poor investment: it may not generate enough revenue to repay the money, and it may create environmental liabilities of its own. Institutions therefore have to judge whether a borrower can repay and to check that the money is used for the purpose stated. Insurance has a role here, because some of these risks can be transferred to an insurer, and supervisory requirements make it clearer who inside a financial institution is responsible for managing them. Taken together, the three ideas describe a system in which financial support, project standards and oversight now operate side by side. Two qualifications are needed: encouragement has not disappeared, and risk management was not absent before 2021.

6. Conclusion

This paper set out to describe what China's green finance policy system contains and how it has changed since 2016. The classification shows that the five groups of instruments do different jobs: credit and bonds raise debt finance, funds provide equity, insurance moves risk, and carbon finance connects financial decisions to emission reduction targets. The timeline shows that the framework has become more detailed over time. The early documents set a direction; later documents specify which projects qualify, provide funding, and require institutions to be evaluated. Implementation and assessment requirements have therefore been added on top of general guidance, rather than replacing it.

The evidence on the market side is narrower than the coverage of the policy documents, and the conclusions have to be limited accordingly. The published loan

figures show continuous expansion; the CBI-aligned bond figures do not follow a single direction. Both are descriptions of what was reported, and neither can be used to rank the instruments against one another or to show that the policies worked. The gap is widest for green insurance and green funds, for which no comparable series is used here. That gap should not be read as evidence that these two instruments are weak or unimportant: the paper simply does not have the data to say how large they are.

Three directions follow from these limits. The first is to study how specific instruments interact rather than describing them side by side, for example by asking whether low-cost central bank funding changed the terms on which banks lend to green projects. The second is transition finance, which raises the question of how activities that are not yet green but are moving in that direction should be treated. The third is to build comparable data for green insurance and green funds, so that all five groups can be described on the same basis. Work in any of these directions would also need to separate genuine changes in financing activity from changes in statistical definitions and in the coverage of market databases. This paper provides a descriptive frame for asking those questions, and its conclusions stay inside the limits of the evidence it uses.

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