China’s Road to Carbon Clarity

Why Banks Should Accelerate Financed Emissions Disclosure

August 2025

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China needs a policy-driven low-carbon economic system to drive progress.

In 2020, China set "dual carbon" goals for its economy; peak emissions by 2030 and carbon neutrality by 2060.[1]

Already, China is leading the world in the development of green industries and is among the largest issuers of green finance. With the peak-emissions milestone less than five years away, the next challenge is extending those achievements beyond green industry to the wider economy.

Financial sector can create virtuous cycle in which businesses equate emissions disclosure with economic benefit.

The financial sector has a critical role to play in this process. As the hub for capital allocation, the industry's Scope 3 financed emissions – those linked to a bank's lending and investment portfolios – extend into every sector of the economy, offering the clearest and broadest window into the decarbonisation process and its opportunities.

By signalling changing expectations to clients, setting clear decarbonisation pathways, and linking lending terms to progress, banks can encourage and accelerate change.

Crucially, lenders can also create a virtuous cycle in which businesses equate emissions reductions and green technology investment with reduced costs and operational benefits, by qualifying for better lending terms and securing access to international markets.

To date, markets such as Singapore, Hong Kong, and the European Union have introduced measures to drive greater disclosure. Now, with financial regulators in China also rapidly escalating disclosure requirements for banks' financed emissions, and some Chinese banks already introducing emissions-linked financial products, Scope 3 reporting is closer to becoming a requirement rather than an option.

Even so, relatively few banks are reporting. At the time of writing, only four lenders were offering voluntary, partial Scope 3 disclosure.

Policy momentum in China opening path for banks to embrace disclosure opportunities.

This will need to change rapidly – and the current policy direction from the People's Bank of China (PBoC) and other regulators indicates there is strong forward momentum (see Figure 1).

For financial institutions, adoption of robust carbon accounting and disclosure frameworks represents a strategy to mitigate compliance risks and a strategic opportunity to attract investment, reshape industrial structures, and establish a global leadership position.

By establishing comprehensive carbon data-tracking systems for credit portfolios, banks can identify climate risks embedded in carbon-intensive industries and encourage clients in carbon-intensive industries to accelerate transition efforts through financial incentives, creating a self-reinforcing cycle.

Figure 1: Timeline of China's evolving disclosure policy.

Year	Policy	Issuance
2021	Guidelines for Financial Institutions Environmental Information Disclosure《金融机构环境信息披露指南》	PBoC
2021	Technical Guidelines for Carbon Accounting by Financial Institutions (Trial) 《金融机构碳核算技术指南（试行)》	PBoC
2024	Guidelines for Sustainable Development Disclosure by Listed Companies 《上市公司自律监管指引—可持续发展报告（试行)》	SSE, SZSE, BSE
2025	Implementation Plan for the High-Quality Development of Green Finance in the Banking and Insurance Sectors 《银行业保险业绿色金融高质量发展实施方案》	NFRA, PBoC
2025	Corporate Sustainability Disclosure Standard No. 1 – Climate (Trial) (Exposure Draft) 《企业可持续披露准则第 1 号——气候（试行）（征求意见稿)》	MOF, MEE

Source：ARE

This report aims to analyse the evolution of both domestic and international regulatory policies, highlight progress made by key financial institutions in China, and offer recommendations to accelerate and enhance Scope 3 disclosure requirements for the nation's banks.

China’s Policy Landscape

China has been taking gradual steps toward a disclosure framework.

China has taken steps in recent years to implement a more comprehensive framework for financed emissions disclosure.

In 2021, the PBoC, China’s central bank, required financial institutions to report Scope 1 and 2 emissions[2] and introduced trial guidelines for the accounting of Scope 3 financed emissions.[3] Before that, several lenders had already begun voluntary disclosure of Scope 1 and 2 emissions, including China Construction Bank (2014), China Agriculture Bank (2016), Industrial and Commercial Bank of China (2016), Bank of China (2017), and China Merchants Bank (2018).

Local pilot projects followed, such as Huzhou’s 2022 carbon accounting method for bank loans and Pudong’s 2024 disclosure rules for financial institutions. These aimed at standardising carbon data management in carbon-intensive sectors.

Exchanges and regulators are signalling a path to mandatory disclosure.

In 2024, the China Securities Regulatory Commission (CSRC) and the country’s major stock exchanges mandated Scope 1 and 2 reporting and encouraged Scope 3 disclosures for key listed firms. This covered companies listed in the Shanghai 180 and Star 50, Shenzhen 100 and ChiNext indexes, and any with dual domestic and overseas listings.

In 2025, a joint plan from the National Financial Regulatory Association (NFRA) and PBoC promoted carbon accounting tools to optimise financial portfolios.[4]

The 2025 “Two Sessions” meeting (the annual plenary sessions of the National People’s Congress and National Committee of the Chinese People’s Political Consultative Conference) further elevated carbon accounting as a national priority and signalled a clear path toward mandatory financed emissions disclosure.[5]

Draft regulation requires Scope 3 disclosure and methodology.

In April 2025, the Ministry of Finance (MOF) and the Ministry of Ecology and Environment (MEE) jointly released the Corporate Sustainability Disclosure Standard No. 1 – Climate (Trial) (Exposure Draft), or the “Climate Standard Exposure Draft”.[6]

The draft explicitly requires enterprises to disclose Scope 3 greenhouse gas emissions and the corresponding measurement methodologies. For commercial banks, the draft specifies the disclosure of financed emissions, including absolute emission figures and detailed information such as total sectoral exposure by asset class.[7]

Although the standards have not yet become mandatory, the draft's release marks the beginning of a shortened preparation window for listed companies to get ready for Scope 3 disclosure. The exposure draft reflects the regulator's intention to incorporate Scope 3 reporting into the compliance framework in the near term, and once the standard is finalised, a compressed transition period is expected. This regulatory trajectory effectively accelerates the timeline for enterprises to establish data infrastructure, develop methodologies, and integrate disclosure processes ahead of formal enforcement.

Case Study: Incentivising Emissions Cuts

In 2025, China Guangfa Bank (CGB) Zhongshan Branch launched a "sustainability-linked loan", which offers tiered interest-rate reductions.

Companies achieving annual carbon emissions reductions of 20%-30%, 30%-40%, and above 40% receive 5, 10, and 15 basis point (bp) discounts, respectively.

The loan integrates dual verification mechanisms, including carbon emissions trading system data and third-party audit reports. One paper manufacturing company, for example, reduced its carbon emissions by 20.74% year-on-year in 2023 through technological upgrades, and successfully secured a 5bp reduction in financing costs.

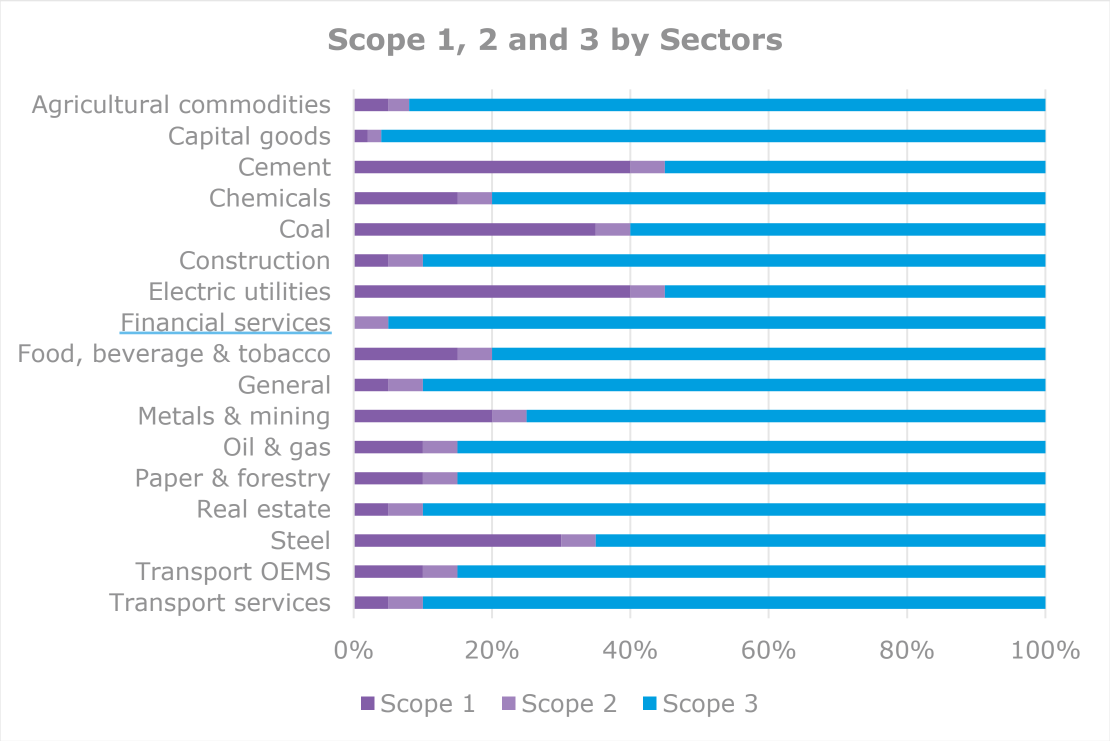
Full Disclosure: Scope 3 in Finance

Scope 3 disclosure is particularly important for financial institutions, because financed emissions cover most of the carbon in each lender's operational footprint. A bank's Scope 3 emissions can be up to 700 times larger than its Scope 1 and 2 footprint, according to the Carbon Disclosure Project (CDP).[8]

While **Scope 1** covers direct emissions from owned or controlled sources and **Scope 2** covers indirect emissions from the generation of purchased energy, Scope 3 encompasses indirect emissions from activities along an enterprise's value chain, divided into 15 specific categories.[9]

To provide a clearer understanding of the differences in emissions exposure profiles across industries, the chart below illustrates the proportion of Scope 1, Scope 2, and Scope 3 emissions as a percentage of totals in major sectors.[10]

Figure 2: Emissions breakdown by industrial sector.

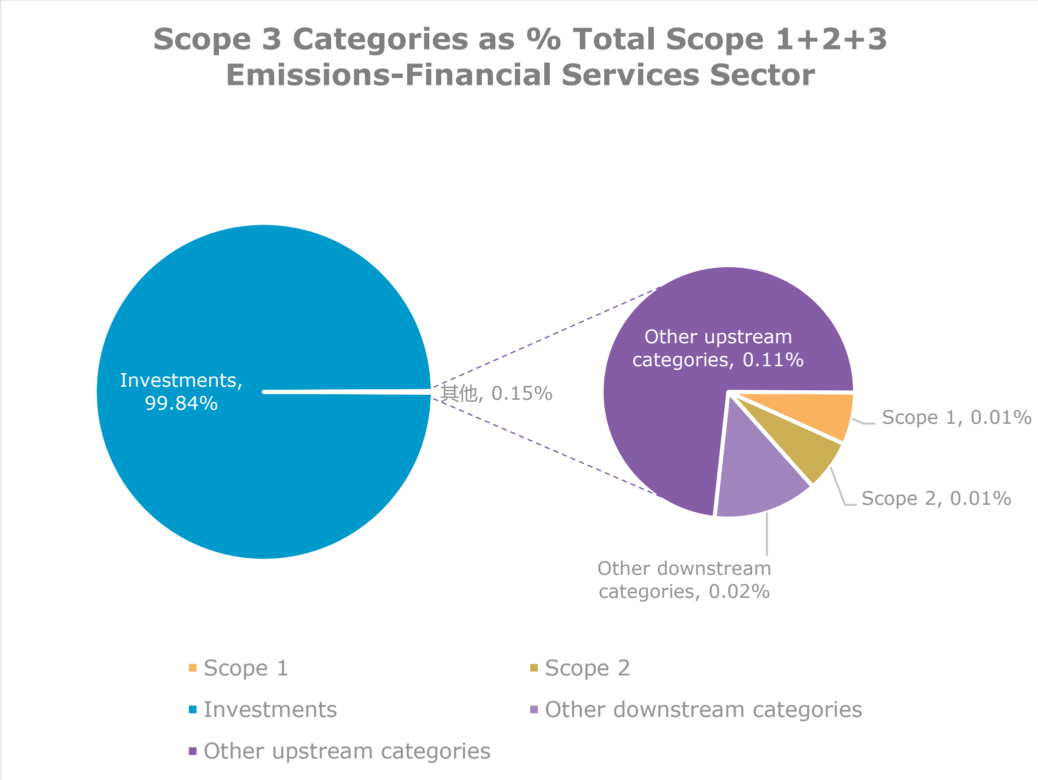


Source: *CDP*

Scope 3, Category 15 is critical for banks and financial institutions as it represents the carbon footprint of their investment activities. Given the sector's pivotal role in capital allocation, the disclosure of financed emissions is increasingly recognised as a key mechanism for driving the transition to a low-carbon economy and is therefore becoming a priority for regulators.

The chart below breaks down the financial sector's emissions by category, highlighting the overwhelming dominance of financed emissions in its overall carbon footprint.[11]

Figure 3: Financial services industry emissions breakdown.



Source: *CDP*

In the case of a loan to a coal-fired power plant, for example, although the bank does not directly operate the facility, the plant's direct (Scope 1) carbon emissions are fully accounted for under the bank's Scope 3 emissions.

Effective management of financed emissions is directly linked to banks' compliance risk control and corporate social responsibility commitments. Through data disclosure and portfolio adjustments, financial institutions can use capital allocation as a lever to drive decarbonisation in carbon-intensive industries, achieving both environmental impact and commercial value creation.

The Global Shift from Voluntary to Mandatory

Developed markets offer reference points for China's evolving regulations.

There has been a shift in climate disclosure policies across developed markets, offering important reference points for China's evolving regulatory framework.

In 2024, the Hong Kong Stock Exchange (HKEX) updated its own code to align with the International Financial Reporting Standards S2 Climate-related Disclosures. Under Section D of the revision, listed companies that meet certain criteria must disclose Scope 1 and 2 emissions starting from their 2025 financial year. Commercial banks are also encouraged to disclose Scope 3, Category 15 emissions.[12]

The Singapore Exchange (SGX) will mandate Scope 1 and 2 emissions disclosure for all listed companies from the 2025 fiscal year. For larger market-cap firms, Scope 3 emissions reporting will become mandatory starting in 2026.[13]

Meanwhile, the European Union (EU) has introduced a phased approach under the Corporate Sustainability Reporting Directive (CSRD), requiring eligible listed companies to report comprehensive sustainability data, including Scope 3 emissions, from 2024 onward.[14]

These developments reflect a broader global trend in climate-related disclosures moving from voluntary to mandatory, especially Scope 3 emissions.

China's banks can maintain competitiveness by aligning with international standards.

For Chinese commercial banks to move into a position of better emissions disclosure and alignment in this area, they need to introduce similar standards that strengthen regulatory preparedness and ensure they can maintain competitiveness in a rapidly evolving global financial landscape.

This will involve the development of financial products that transform banks' data requirements into products that incentivise corporate emissions reductions. (Some banks are already doing this – *see p12-13.)* By enforcing third-party verification of disclosures, integrating provincial carbon-trading systems data, and establishing dynamic monitoring mechanisms, financial institutions can be instrumental in the growth of a carbon disclosure ecosystem.

This process could compel companies to build their own standardised carbon management systems and encourage a cycle in which businesses equate emissions reductions and green technology investment with reduced costs and operational benefits (such as favourable borrowing terms, access to markets etc).

Ultimately, such innovations help address the long-standing challenge of inadequate carbon accounting frameworks among Small and Medium-sized Enterprises (SMEs), paving the way for more transparent and structured emissions reporting.

Figure 4: Disclosure Requirements in Asian Markets

Market	Applicable Entities	Disclosure Scope	Scope 3 Requirements	Regulatory Basis / Standards	Regulatory Timeline
China (Mainland)	Shanghai Stock Exchange Index 180 and STAR Market 50 Index	Scope 1 and 2 required; Scope 3 encouraged	Encouraged (not mandatory)	Shanghai, Shenzhen and Beijing Stock Exchange ESG guidelines (2024)	From 2025
Hong Kong[15]	Large Cap, Main Board and GEM issuer	Scope 1 and 2 mandatory (subject to materiality); Scope 3 encouraged	Category 15 (Financed Emissions) encouraged for banks	HKEX ESG Reporting Code aligned with IFRS S2	From FY starting Jan 1, 2025
Singapore	All listed companies on SGX	Scope 1 and 2 mandatory	Mandatory for large-cap companies from FY2026	SGX Sustainability Reporting Requirements	Scope 1 and 2 from FY2025; Scope 3 (large-cap) from FY2026
Japan[16]	Prime Market listed companies	Scope 1 and 2 mandatory; Scope 3 voluntary	Voluntary	TCFD-aligned disclosure under Japan FSA & TSE	Mandatory ESG reporting from 2027
South Korea[17]	Large listed companies on KOSPI (assets ≥ KRW 2 trillion)	Scope 1 and 2 mandatory	Voluntary (at current stage)	KRX ESG guidelines; future roadmap toward ISSB standards	Mandatory ESG reporting (Scope 1 and 2) from 2026

The Disclosure Opportunity

Accelerating disclosure reduces risk, boosts competitiveness, and opens markets.

For banks, developing a disclosure framework aligned with international standards offers several potential advantages: reducing regulatory and operational risk, boosting global competitiveness, and sending strong signals to investors and other stakeholders.

Making emissions more visible and more quantifiable enables investors and other stakeholders to assess a company's climate-related risks and align investment decisions accordingly. This will increase external and internal accountability.

Aligning with international standards can also attract more investment as well as maintain or open access to markets. For example, some of China's roughly USD516 billion[18] in exports to the EU, in sectors such as metals and cement, are already subject to EU's Carbon Border Adjustment Mechanism (CBAM), and more sectors are likely to follow as the EU tightens carbon accounting regulations.

Emissions-linked Banking Products in China

Several banks already developing carbon-linked financial products.

As official policy evolves, bank products will need to reflect and reinforce the changing regulatory environment. By leveraging tools such as preferential interest rates and sustainability-linked loan terms, banks can drive the low-carbon transition of carbon-intensive industries.

Integrating carbon emissions data into financing conditions creates synergies between financial resource allocation and low-carbon transition goals.

Some commercial banks in China are already moving in this direction, linking corporate carbon emissions to financial product pricing.

Figure 5: Examples of emissions-linked financial products from Chinese banks.

Bank	Product	Details
China Construction Bank Guangdong Branch[19]	Carbon Footprint-Linked Loan	- Loan interest rate linked to corporate CO_2 emissions - Third-party verification
China Guangfa Bank Zhongshan Branch[20]	Sustainability-Linked Loan	- Loan interest rate linked to corporate CO_2 emissions ✓ *20%–30% receive a 5bp discount* ✓ *30%–40% receive a 10bp discount* ✓ *Above 40% receive a 15bp discount* - Third-party verification
Huaxia Bank Nanjing Branch[21]	Carbon Footprint-Linked Loan	- Loan interest rate linked to the carbon footprint of corporate products - Third-party verification
People's Bank of China Shenzhen Branch[22]	Carbon Reduction Loan	- Loan interest rate, term, and amount linked to corporate CO_2 emissions - Verification through local credit platform
Industrial Bank[23]	ESG-Linked Loan	- Loan interest rate linked to greenhouse gas emission intensity
Bank of Nanjing Zhenjiang Branch[24]	Carbon Footprint-Linked Loan	- Loan interest rate linked to the carbon footprint of corporate products - Third-party verification
Panzhihua Rural Commercial Bank[25]	Transition Finance Loan	- Loan interest rate linked to the carbon footprint of corporate products ✓ *Loan amount: RMB30 million* ✓ *Loan term: 5 years* ✓ *Initial interest rate: 4.7%* ✓ *17.3% energy reduction by end-2025: interest rate lower 10bp* ✓ *33.5% energy reduction by end-2027: additional 10bp cut* - Third-party verification

Progress & Challenges

Despite regulatory progress, few banks disclosing emissions so far.

Despite the growth of emissions-linked products, so far only a few listed commercial banks in China have begun Scope 3 disclosure.

Shanghai Rural Commercial Bank, for example, disclosed the financed emissions from loans to eight carbon-intensive industries (electricity, building materials, steel, non-ferrous metals, petrochemicals, chemicals, paper, and aviation) in its 2023 Environmental Information Disclosure Report.[26]

Ping An Bank disclosed the financed emissions from its corporate and personal auto loans in its 2023 Sustainability Report,[27] using the Partnership for Carbon Accounting Financials (PCAF)[28] framework – including asset categories and calculation methodologies.

Case Study 2: Carbon-linked loans

China Construction Bank Guangdong Branch introduced a “carbon footprint-linked loan”, which applies a dynamic interest rate adjustment model. Using a third-party verified emissions baseline, interest rates fluctuate based on a company’s annual carbon emissions performance, creating a strong link between emissions data and financing costs.

This indicates that the measurement process still faces significant challenges:

Data, accounting standards, costs, and lack of coordination remain significant challenges.

- **Data Accessibility:** SMEs typically lack carbon management capabilities, making it difficult for banks to obtain direct emissions data. While lenders may impose contractual obligations requiring companies to provide such data, this could lead to resistance from clients because of the complexity and extra costs involved.
- **Accounting Standards:** China currently lacks a unified operational framework for financial institutions' carbon accounting. Most banks refer to PCAF methodologies, but these face local adaptation challenges in the Chinese market.
- **Technological Costs:** Medium and smaller banks must invest heavily in internal carbon management systems, data modelling, and third-party verification, imposing a substantial financial burden.
- **Inefficient Cross-Department Coordination:** Unclear division of responsibilities between Board Office, Risk Management, and Credit Departments results in prolonged data collection processes and operational inefficiencies.

These challenges highlight the urgent need for standardised methodologies, enhanced data-sharing mechanisms, and improved institutional coordination to accelerate financed emissions disclosure across the banking sector.

Future Policy Trends

Mandatory Scope 3 disclosure likely to be phased in through 2030.

China's financial regulators appear to be adopting a phased implementation approach to mandatory Scope 3 disclosure that is likely to unfold as follows:

Phased Regulatory Roadmap

1. **2025–2027**
   Systemically important and listed banks are expected to be the first required to disclose financed emissions data. The primary objective at this stage is to establish industry benchmarks and build practical experience. Regulators may require banks to disclose the absolute carbon emissions associated with loans to carbon-intensive industries (such as power generation, steel production) in their annual or sustainable development reports, in accordance with the latest *Climate Standard Exposure Draft*. Third-party verification mechanisms may also gradually be introduced to enhance data credibility.

2. **2028–2030**
   Disclosure requirements are likely to be expanded to all commercial banks. Financed emissions data may be integrated into all ESG rating frameworks, becoming a key indicator of a bank's sustainability performance. Banks failing to meet disclosure standards could face reputational risks, restrictions on business expansion, or limited access to financing channels. Regulatory authorities may impose administrative penalties, such as fines or mandatory corrective actions for banks that fail to meet disclosure targets for two consecutive years.

Recommendations & Action Plan

Early action is crucial to prepare for regulations and capture opportunities.

With mandatory disclosure of financed emissions likely imminent, early action is crucial for commercial lenders. Some banks have already made significant steps in this direction but establishing a phased roadmap will help lenders prepare for regulatory developments.

Short-Term Actions: Building a Foundational Database

- Assess existing loan portfolios by categorising projects by industry to evaluate carbon emissions and identify carbon-intensive risk exposures. Holland-headquartered multinational ING's Terra approach, for example, involves measuring emissions associated with clients in carbon-intensive sectors and benchmarking them against science-based decarbonisation scenarios.[29] Similarly, Singapore's DBS bank outlined in its 2022 "Our Path to Net-Zero" report a sectoral approach covering nine key carbon-intensive industries, setting specific decarbonisation pathways and interim targets based on each sector's emissions profile and risk exposure.[30]

- Enhance collaboration with third-party verification agencies to ensure data accuracy and credibility. Partnering with authoritative carbon verification institutions will strengthen the reliability of disclosures and enhance regulatory compliance.

Banks can develop actions plans to phase-in full disclosure.

Medium to Long-Term Strategy: Standardisation and Ecosystem Development

- Focus on standardising carbon accounting methodologies and fostering industry-wide collaboration. Active participation in developing sector-specific guidelines – such as a financed emissions accounting framework for carbon-intensive industry – would help establish a unified methodology for data collection and disclosure.

- Foster industry partnerships, such as an interbank green finance alliance. The **Network for Greening the Financial System (NGFS)**, for example, is a global coalition of central banks and financial supervisors working together to enhance the role of the financial system in managing climate and environmental risks and mobilising capital for green and low-carbon investments. This can significantly reduce implementation costs, particularly for smaller and medium-sized lenders. Joint procurement of carbon accounting software or shared data collection templates would enable smaller institutions to integrate standardised systems at a lower cost.

Some global banks already using AI tools to streamline data, financing processes.

- Optimise emissions data collection through integrating artificial intelligence (AI) tools. Some banks have piloted AI-driven systems to automatically extract publicly available corporate emissions data and match it with internal loan databases, significantly reducing manual workload and improving data accuracy. In Europe, several banks, such as Swedbank, have piloted AI systems that match borrower data with public emissions registries, significantly reducing collection time and improving granularity.[31] HSBC, for example, has applied AI to monitor clients' carbon footprints and identify high-impact climate projects, helping to direct financing towards initiatives with greater emissions reduction potential.[32]

Banks, industry bodies can take the lead in developing accounting frameworks.

- Proactively engage with industry associations, research institutions, and third-party verification agencies to co-develop localised carbon accounting methodologies. While the PBoC has released a trial version of a carbon accounting approach for financial institutions, it is voluntary and lacks detailed implementation guidelines. This leaves room for banks and industry bodies to take the lead in piloting more granular, sector-specific accounting frameworks. Establishing a unified emissions reporting structure grounded in existing methodologies would enhance data comparability and support regulatory readiness.

Client incentive and outreach initiatives can boost relationships and accelerate decarbonisation.

Client Engagement: Shifting from Data Collector to Strategic Partner

- Transition from passive data collection to active enabling by using financial products to incentivise corporate carbon management.

- Offer preferential lending terms — such as additional credit lines or lower interest rates — to companies that provide comprehensive carbon data and achieve annual emission reduction targets.

- Strengthen client education. Hold capacity-building initiatives as a bridge between banks and customers. By organising carbon management training programmes, banks can equip clients with carbon accounting methodologies and decarbonisation strategies, improving data submission while fostering long-term customer relationships.

Conclusion

Chinese banks have an opportunity to establish a position of leadership on green and sustainable lending that will serve the dual carbon goals of fulfilling national policy objectives and strengthening the country's role in the global transition.

China's financial sector has already made strong start through lending to green industries. The next step is to put the necessary bank infrastructure in place to support the transition in the rest of their portfolios. Accelerating alignment with accounting and disclosure standards will prepare them for impending regulatory evolution and enhance the transparency and credibility of China's lenders in the eyes of global investors.

So far, despite strong policy signals from the PBoC and other regulators, few banks have made voluntary Scope 3 disclosures.

With China's stock exchanges and financial authorities stepping up efforts to introduce mandatory climate-related disclosure frameworks, the window for voluntary, flexible action is rapidly narrowing. In 2025 alone, a series of key policy moves from the NFRA and PBoC directly signalled the acceleration of supervisory pressure. Banks that delay risk being caught unprepared when detailed and enforceable requirements come into force.

By developing and implementing robust carbon accounting frameworks early, China's banks have a chance both to gain a competitive advantage and take a leadership position on the world stage

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