HSBC GBA ESG Index Report

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HSBC | Opening up a world of opportunity

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Executive Summary

Executive Summary

This report is the annual update of the HSBC GBA ESG Index (the Index), which analyses the ESG and sustainable development performance of the Guangdong-Hong Kong-Macao Bay Area (GBA) in 2024.

The GBA ESG Regional Index recorded
a year-on-year increase of
3% in Q4 2024,
reaching a value of
130.76

1

The development of New Quality Productive Forces was the focus of the government in 2024. That being the case, governments in the GBA doubled down on policy support in areas such as developing emerging and future industries and upgrading manufacturing equipment on a large scale, resulting in a year-on-year increase of 13% in the policy area.

In 2024, the country stepped up efforts to promote large-scale equipment upgrades, as part of a drive to boost domestic demand and support economic growth. In line with the national call, Guangdong Province and all Pearl River Delta (PRD) municipalities within the GBA issued implementation plans. Governments encouraged efforts to promote equipment upgrades aimed at energy conservation and emissions reduction, ultra-low emissions, safe production, digital transformation and intelligent upgrading.

Developing strategic emerging and future industries was another policy focus. In September 2024, Guangdong Province issued an action plan identifying the future industries that each PRD city within the GBA will focus on. Furthermore, Hong Kong incorporated into its 2024 Policy Address its plans for industries such as the low-altitude economy, new energy, and aerospace science and technology.

2

In response to the more stringent environmental requirements of the international market, the GBA made concrete efforts to promote the green transformation of areas such as the shipping, aviation and automobile industries by adopting renewable or clean energy and conducting carbon footprint assessments. At the same time, industries within the GBA have continuously improved their environmental management, as evidenced by an increasing number of companies setting ambitious carbon reduction targets and increasing engagement with the CDP[i] questionnaire.

A number of actions were adopted or proposed by the GBA to promote the green transformation of industries, such as setting carbon emission reduction targets for Hong Kong's registered ships, engaging in the sustainable aviation fuel (SAF) pilot program, and developing carbon footprint assessment for vehicles and recycling battery materials.

Our study observed that over 100 companies within the GBA (27% of the national total) set their first carbon emission reduction targets or made commitments via the Science Based Targets initiative (SBTi)[ii] in 2024, representing a year-on-year increase of 58%. Additionally, 37% of GBA companies who were invited to complete the CDP disclosure submitted their responses, compared to 32% of companies in China overall.

i. The CDP is an international non-profit organisation that helps companies and cities disclose their environmental impact.
ii. The SBTi is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). The SBTi defines and promotes best practices in science-based target setting. Offering a range of target-setting resources and guidance, the SBTi independently assesses and approves companies' targets in line with its strict criteria.

3

Though the volume of GSSS bonds[iii] issued by the GBA declined in 2024, primarily due to a significant decrease in the Hong Kong government's issuance volume, the total issuance volume of all sectors (excluding governments) recorded a year-on-year increase of 33% in 2024. Moreover, the Guangdong Province government and the Shenzhen government were more active in issuing offshore RMB GSSS bonds in Hong Kong and Macao.

In 2024, the financials sector overtook the government as the most significant source of GSSS bonds within the GBA, accounting for approximately 29% of the total issuance volume within the region. Hong Kong, Guangzhou, and Shenzhen were the primary issuers of GSSS bonds within the GBA, accounting for around 92% of the GBA's total volume. Other GBA cities' involvement in the GSSS bond market grew in 2024, with nearly triple the issuance volume of 2023.

In the green and sustainable investment market, our study observed that new launches of ESG mutual funds by fund management companies based in the GBA reached a new high in 2024, with a year-on-year increase of 65%.

The average value of the GBA ESG Industry Sub-indices trended upwards in 2024 with some fluctuations and reached a value of
223.20
in Q4 2024, representing a year-on-year increase of
20%

4

China, including the GBA, has unveiled several significant documents over the past few years to enhance ESG and sustainability disclosure, and to improve the ESG standard system. As a consequence, an increasing proportion (from 69% in FY2019 to 76% in FY2023) of listed GBA companies[iv] now make ESG disclosures, the most significant improvement being in the governance pillar.

Mainland China made great strides in establishing an ESG standards system in 2024, with the aim of establishing a nationwide standard by 2030. At the same time, Hong Kong is in the process of becoming one of the first jurisdictions to align local sustainability disclosure requirements with ISSB standards.

Mandatory ESG disclosure leads to a high ESG disclosure rate[v] and an improvement in ESG reporting quality. Our study observed that the ESG disclosure rate of companies listed in Hong Kong was about 100%, higher than those of companies listed only in mainland China. Additionally, companies listed in Hong Kong performed better than those listed solely in mainland China.

According to the most up-to-date information available[vi], the GBA ESG Sub-indices for Large Companies and the GBA ESG Sub-indices for SMEs both reached new highs, with year-on-year increases of 14% and 15%, respectively.

5

This report looks at the ESG performance of the financials sector in 2024. It also looks at the issue of transition finance which is necessary for those high-emitting and hard-to-abate industries in the GBA wishing to transition to low carbon. The report goes on to analyse current transition finance tools and the practices adopted by financial institutions.

High-emitting and hard-to-abate sectors, including petrochemicals, building materials, the aviation and shipping industries, are significant pillars of the GBA economy. Transition finance is required to facilitate the transition pathway and exploration and application of relevant climate technologies, such as fuel substitution, raw material substitution, and use of carbon capture and utilisation and storage (CCUS) technology.

Financial institutions are the primary agents charged with managing and co-ordinating transition finance. Some financial institutions have established internal transition finance frameworks or issued transition products, such as transition bonds and sustainability-linked loans, to facilitate the use of transition finance in high-emitting and hard-to-abate sectors.

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iii. GSSS bonds include green bonds, social bonds, sustainability bonds and sustainability-linked bonds. GSSS bonds issued by issuers in the GBA or any specific GBA city in this report refer to both onshore and onshore GSSS bonds issued by entities registered or primarily operating in the GBA or any specific GBA city.
iv. Unless otherwise specified, "companies in the GBA" or "GBA companies" refer to listed companies registered or primarily operating in the GBA.
v. ESG disclosure rate = the number of GBA's listed companies disclosed their ESG, corporate social responsibility(CSR), sustainability or other non-financial reports / the total number of GBA's listed companies
vi. In this report, the ESG Sub-indices by Company Size analyses the ESG performance of 470 sample GBA companies in 2023, based on the companies' 2023 ESG, CSR, sustainability or other non-financial reports released in 2023, and other public sources

GBA ESG Regional Index

GBA ESG Regional Index

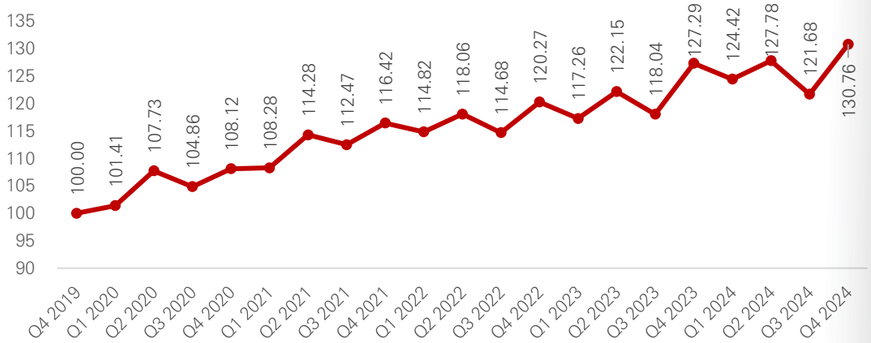
The GBA ESG Regional Index increased in value in 2024 reaching a new high of

130.76

in Q4, a year-on-year increase of approximately

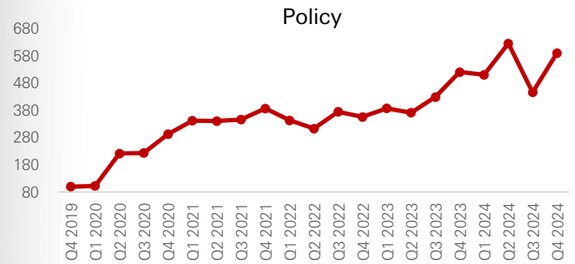
3%

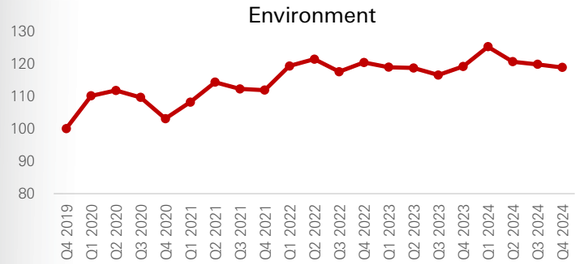
Figure 1. The GBA ESG Regional Index

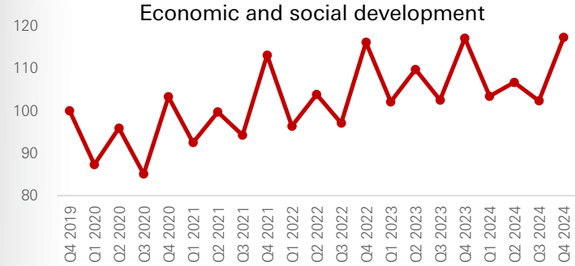


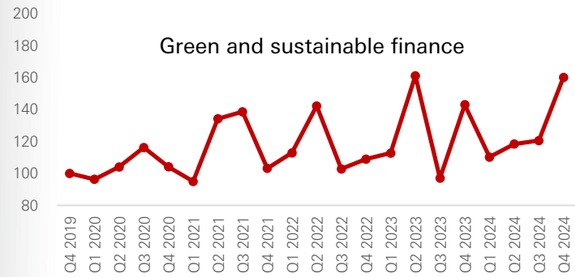
Source: China's official statistical database, public disclosure of listed companies, public information from relevant third-party databases, other public sources, CECEPEC

Figure 2. Breakdown of the GBA's performance in the five areas

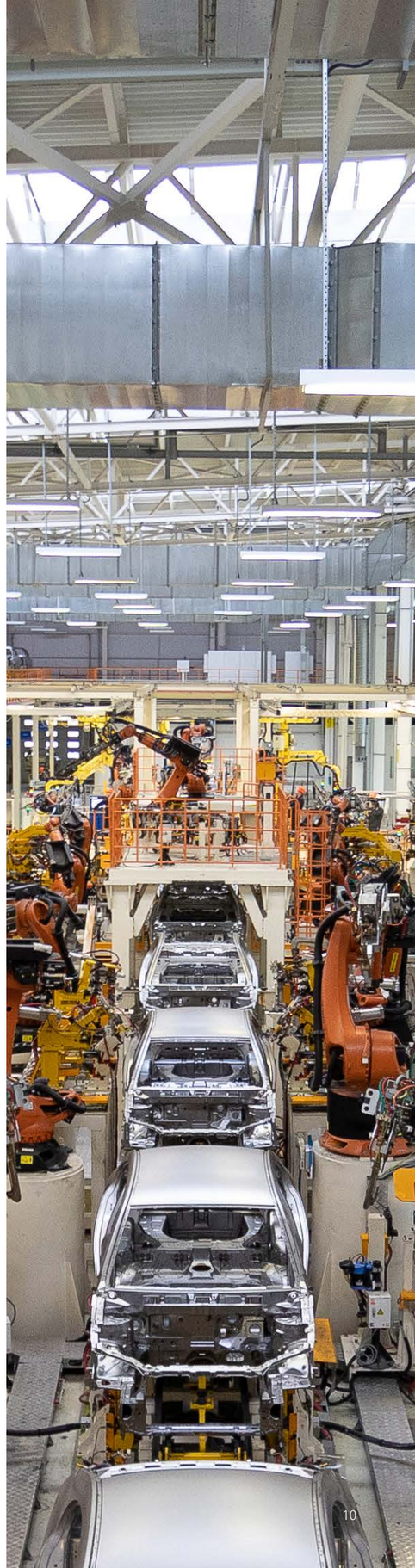


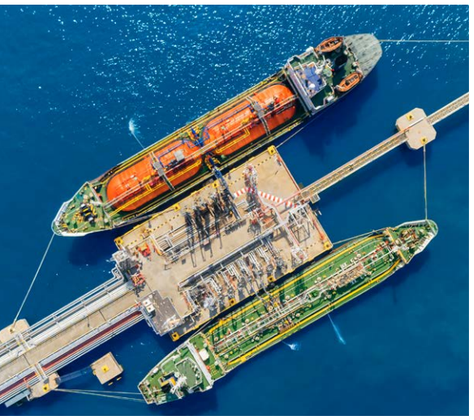






Note: The values are normalised. The base values were 100.00 for Q4 2019 (base period).
Source: China's official statistical database, public disclosures of listed companies, other public sources, CECEPEC





The GBA achieved high values in the policy area in 2024, especially in Q2 and Q4, reflecting the fact that in those quarters governments issued a large number of policies to support the region's ESG and sustainability development. In the area of the environment, the GBA's performance in 2024 was stable maintaining the trend of the previous two years. However, the performance of the economic and social areas was cyclical.

Our study observed that corporate governance improved in 2024, driven by the increase in ESG disclosure. The performance in Green and Sustainable Finance was relatively weak in the first three quarters of 2024, due to the GSSS bond market not being as active as in 2023. However, there was a significant increase in Q4 2024, driven by improvements in ESG mutual funds.

Policy

Legislators within the GBA launched a number of policies in 2024 that are highly aligned with the topic of New Quality Productive Forces, which was one of the country's primary strategies.

These policies primarily focus on a handful of areas, including innovation and technology, equipment renewals, trade-in-of consumer goods, and support for the strategic emerging and future industries.

In this section, we focus on the government's support, including policy guidance and financial support, in the areas of large-scale equipment renewals and strategic emerging and future industries. Given the close relationship between economic and social development and the topics of innovation and consumption, we will further analyse these two topics in the section on Economic and Social Development.

Large-scale equipment renewals

In 2024, the country stepped up efforts to promote large-scale equipment upgrades, as part of efforts to boost domestic demand and support economic growth. In line with the national call, Guangdong Province issued an implementation plan in April. Furthermore, in the first half of 2024, all PRD municipalities within the GBA unveiled their implementation plans at the city level. Governments encourage efforts to promote equipment upgrades aimed at energy conservation and emission reduction, ultra-low emissions, safe production, digital transformation and intelligent upgrading.

Key focussed areas by the governments:
Industrials, Energy, Building, Municipal Infrastructure, Transportation, Agriculture, Education, Culture, Tourism and Healthcare.

Financial support by the governments:

- In July 2024, the central government allocated approximately **RMB150 billion in ultra-long special treasury bonds** to support large-scale equipment renewals. The proceeds of RMB150 billion in the special bonds have been allocated to over 4,600 eligible projects.[1]
- In April 2024, The People's Bank of China(PBOC) established a **relending program for scientific and technological innovation and transformation**, with the aim of boosting financial support for technology transformation and equipment renewal of small and medium-sized enterprises (SMEs) in the high-tech sector. The amount earmarked for the program is RMB500 billion.

In December 2024, the Ministry of Finance published a draft policy document on the standards to be applied to domestic products in government procurement processes. This document, which is open for public comment, proposes that a 20% price reduction be applied to the bidding price of domestic products in government procurement processes where both domestic and non-domestic products compete. Similar to the policy of large-scale equipment renewal, the aim of this policy is to stimulate the development of manufacturing industry within China.

Support for strategic emerging and future industries

Strategic emerging and future industries play a leading role in stimulating productivity and generating new growth. Governments within the GBA have set out a series of policies to support the development of strategic emerging and future industries within the region. For example, in September 2024, Guangdong Province issued an action plan to promote the development of future industries. This document identifies the future industries that each PRD city within the GBA will focus on. Furthermore, Hong Kong incorporated its future efforts in industries such as low-altitude economy, new energy, and aerospace science and technology into its 2024 Policy Address.

Strategic emerging industries within the GBA:	Future industries within the GBA:
Semiconductors and integrated circuits	Electronics and information
High-end equipment manufacturing	Intelligent equipment
Intelligent robots	Life and health
Blockchain and quantum information	Materials
Advanced new materials	Green and low-carbon industries, such as hydrogen, and new energy storage
New energy	
Leasers and additive manufacturing	
Digital creativity	
Safety, emergency response and environmental protection	
Precision instruments and equipment	

At the end of 2024 and in early January 2025, the Chinese central government set out the country's working focus for the year 2025. The abovementioned areas which were the focus in 2024 are still the focus in 2025. It is also worthwhile noticing that the silver economy, which is highly related to ESG, is one of the working focuses in 2025. Hong Kong's 2024 Policy Address also proposed a series of tasks to develop the silver economy in the future.

Silver economy:

Silver economy refers to an economy that provides products or services for the elderly.[2] With the population aged 60 and above exceeding 290 million, China is working to tackle the population ageing while improving the livelihood of the elderly.[3] Developing the silver economy conforms to this trend, which promises new development opportunities for many sectors, including food, housing, transportation, healthcare, intelligent products, etc. According to public data, China's silver economy is estimated at around 7 trillion yuan (about 974 billion U.S. dollars) in size and is expected to reach 30 trillion yuan by 2035.[3]

Environment

In 2024, in response to the changing requirements of international markets and national calls to cultivate a "world-class green and low-carbon industrial cluster within the GBA", the region has made concrete efforts to achieve the green transformation of various industries.

To curb emissions from the transportation sector, the international community has put forward policies and regulations on the carbon emissions of **shipping** and **aviation** industries in recent years. For example, the EU Emission Trading System (EU ETS) expanded to include shipping in 2024. To address the profound challenges brought by regulatory changes, GBA cities have accelerated the green transformation of the shipping and aviation industries.

Shipping

As mentioned in our report dated July 2024, the Hong Kong Marine Department launched the Green Incentive Scheme in June to offer cash incentives to promote the green transformation of registered ships. In November, the Hong Kong government promulgated the Action Plan on Green Maritime Fuel Bunkering (the Action Plan) to set out clear strategies and actions to promote the development of the city into a high-quality green maritime fuel bunkering centre. The Action Plan outlined five green-centric strategies and 10 actions, with carbon emission reduction targets for registered ships. With the timely implementation of the action plan, it is expected that Hong Kong will provide bunkering services to ocean-going vessels powered by green maritime fuels such as liquefied natural gas (LNG) or green methanol for over 60 times a year by 2030, involving over 200,000 tonnes of green maritime fuels.[4]

Aviation

In September, a SAF pilot program began in mainland China. An initial group of three aviation companies, one of which is headquartered in Guangzhou, participated in the program. Hong Kong, being an international aviation hub, also aims to reduce carbon emissions in the aviation industry. The Hong Kong government aims to set usage targets for SAF in 2025.

The **automobile** industry also faced challenges due to protectionist trade measures and more stringent environmental policies such as the New EU Battery Regulation. In the previous report dated July 2024, we analysed in detail the GBA's and China's actions in response to such challenges, such as developing carbon footprint assessment and recycling battery materials. Additionally, in October 2024, the GBA Carbon Footprint Labeling Certification System (Certification System) was officially launched, which will provide technical support regarding carbon footprint assessment for companies in both traditional and emerging industries. It is worth noting that the battery is one of the products covered by the Certification System.

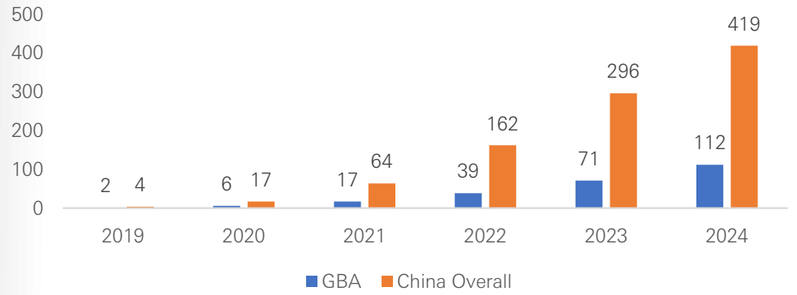
Hydrogen energy is an emerging industry in the field of renewable energy and is also one of the strategic sectors in the GBA. As one of the first regions to develop a hydrogen energy industry, the GBA has a complete industrial chain. Cities within the GBA are actively looking at ways to increase synergies in the development of the hydrogen sector while complementing one another in the industrial chain. Detailed analysis of the hydrogen industry in the GBA can be found in the previous report dated October 2024.

In summary, pressure from the international market and calls from central government have created both opportunities and challenges, and governments and industries within GBA have responded with strong co-ordinated efforts.

Through consistent monitoring of the performance of GBA companies on carbon reduction and their responses to the CDP questionnaires, we found that GBA companies have made sustained efforts to align their ESG disclosure practices and carbon emission reduction targets with international initiatives.

In 2024, 112 companies in GBA set their first carbon emission reduction targets or made commitments via the SBTi, accounting for 27% of the national total. The breakdown of regional data shows that around half of the 112 companies are from Hong Kong. Additionally, there was a significant increase in the number of companies from the PRD municipalities within the GBA, with year-on-year growth of 70%. Our study also looks at the targets set. According to our data, most companies set near-term science-based targets (SBTs)[vii] only. Some companies set comprehensive targets, including near-term, long-term[viii] and net-zero[ix] targets.

Figure 3. Number of companies that set their first carbon emission reduction targets or made commitments via SBTi

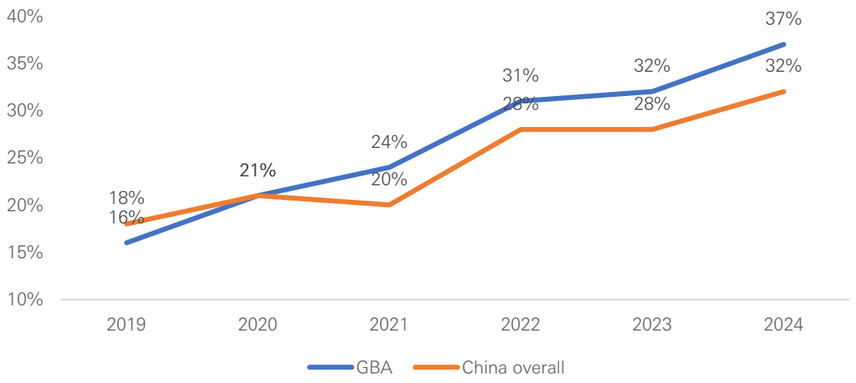


Note: The data for Chinal overall covers companies in mainland China, Hong Kong, Macao and Taiwan.
Source: SBTi, CECEPEC

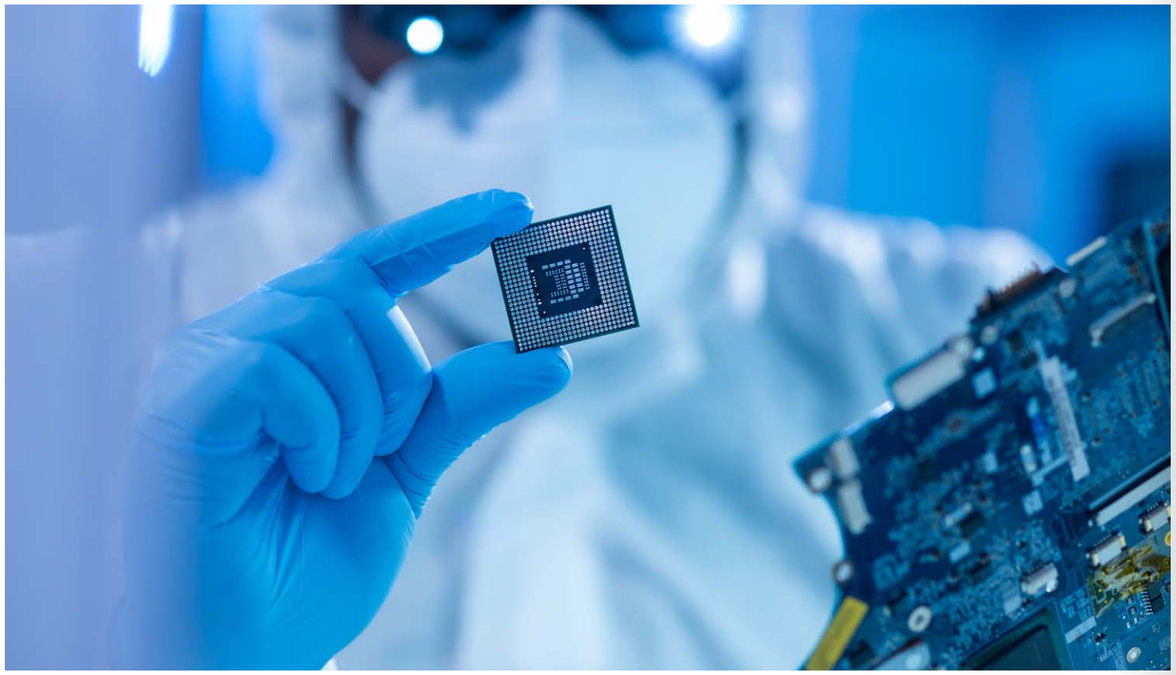
vii. Near-term science-based targets are 5-10-year greenhouse gas mitigation targets that require companies to align their Scope 1 and 2 targets with a 1.5°C pathway goal while Scope 3 ambitions should retain a threshold of well below 2°C(Source).
viii. Long-term science-based targets show companies how much they must reduce value chain emissions to align with reaching net-zero in line with 1.5°C pathways by 2050 or sooner (2040 for companies in the power sector)(Source).
ix. The SBTi Net-Zero Standard defines a net-zero target as: a) Reducing scope 1, 2, and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global or sector level in eligible 1.5°C-aligned pathways. b) Neutralising any residual emissions at the net-zero target year and any GHG emissions released into the atmosphere thereafter(Source).

According to our study, roughly 300 GBA companies were invited to complete the CDP disclosure on climate change in 2024 and approximately 37% of these submitted their responses. As shown in Figure 4, the disclosure rates of companies within the GBA have been consistently higher than those of companies at the national level for the past four years. Our study will monitor the results for 2024 and a detailed analysis of the GBA's performance will be included in the quarterly reports for 2025.

Figure 4. Disclosure rate of the CDP climate change questionnaire, GBA vs. China overall



Note1: The data for China overall covers companies in mainland China, Hong Kong and Taiwan.
Note 2: Disclosure rate of the CDP climate change questionnaires = no. of companies that submitted the CDP climate change questionnaire / no. of companies invited to disclose via the CDP climate change questionnaire.
Source: CDP, CECEPHK, CECEPEC



Economic and Social Development

As mentioned in the Policy section, the development of New Quality Productive Forces is related to social and economic areas such as innovation and technology, and consumption. In 2024, the GBA took a series of actions to promote New Quality Productive Forces in the aforementioned social and economic areas.

In recent years, the GBA has placed increasing emphasis on innovation, one of the ESG issues that is key to developing the New Quality Productive Forces. According to the latest public data, the GBA has continued to increase its expenditure on research and development (R&D) to consolidate its position as an international sci-tech innovation hub.

Investment in and financial support for innovation and technology have been increasing. Specifically, governments within the GBA promote innovation within the region by providing financial support and resources, such as sci-tech special funds. In line with the Government's strategy of improving access to technology finance, financial institutions within the GBA continued to empower sci-tech enterprises by developing innovative products such as "Take-off Loan (腾飞贷)" launched by Shenzhen's banks in Q3 and "Guanrong(莞融)" launched by Dongguan's banks in Q4.

Latest data on the GBA's expenditure on R&D:

- In 2023, Guangdong Province ranked first in provincial R&D expenditure for the eighth consegutive year, reaching RMB 480.26 billion with a year-on-year increase of 8.9%.[5]
- The R&D intensity[x] was 3.54% in 2023 an increase of 0.12% compared with 2022.[5]
- Hong Kong's total R&D expenditure in 2023 increased to HKD33.01 billion with a year-on-year increase of 9.5%.[6]

Financial support by the governments within the GBA

- In 2024, the Guangdong Province government launched a special sci-tech fund to the value of RMB10 billion, of which RMB 4.23 billion was used to support technical innovation and RMB2.06 billion was used to attract talent.[7] The government plans to provide funds of RMB10 billion in 2025 to support sci-tech development, with a focus on areas such as integrated circuits, display manufacturing equipment, and industrial software.
- In 2024, the Hong Kong government increased its investment in innovation and technology. Specifically, the government invested HKD6 billion for universities to set up life and health technology research institutions and invested HKD3 billion to support frontier technology research.[8] The government has stated that in 2025 it plans to set up a HKD10 billion I&T Industry-Oriented Fund to channel investment in specified emerging and future industries, including life and health technology, artificial intelligence(AI) and robotics.

Financial support by the governments within the GBA

- As of the end of September 2024, Guangdong Province's balance of loans for high-tech manufacturing and digital product manufacturing industry exceeded RMB750.00 billion and RMB640.00 billion, respectively.[9]
- As at the same date, the province's balance of loans in the scientific research and technology services industry was RMB185.60 billion, up 23% year-on-year.[10]

Regional synergistic development is significant to sci-tech innovation in the GBA. It can integrate each area's advantages, such as Hong Kong's international vision and resources, Macao's scientific research achievements and mainland China's industrial advantages to build up a whole process innovation chain within the GBA[xi]. The Hetao Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone and the Guangdong-Macao In-Depth Cooperation Zone in Hengqi are two typical co-operation zones within the GBA, which facilitate the collaboration and transformation of achievements within the GBA in sci-tech innovation.

x. R&D intensity is R&D expenditure as a percentage of GDP.
xi. The whole process innovation chain refers to the whole process from basic research to the transformation of achievements(Source).

The Hetao Shenzhen-Hong Kong Science and Technology Innovation Co-operation Zone(Hetao Co-operation Zone)

In June 2024, agreements for 13 key projects focussed on AI, life science and other industries were signed in the Hetao Sci-tech Innovation Centre in the Shenzhen Park of the Hetao Co-operation Zone.[11] As at December 2024, the Shenzhen Park of the Hetao Co-operation Zone had promoted and implemented more than 200 high-end scientific research projects, gathered over 440 sci-tech enterprises, and attracted more than 15,000 scientific researchers.[12]

To ease the difficulties in transferring offshore capital to research institutions within mainland China, "Kehuitong (科汇通)" was launched by the State Administration of Foreign Exchange and piloted in the Shenzhen Park of the Hetao Co-operation Zone in 2023. In October 2024, the policy extended to the whole city of Shenzhen and further extended to 16 cities, including Guangzhou and Shanghai in January 2025.

Guangdong-Macao In-Depth Cooperation Zone in Hengqin

Macao ranks fourth among the GBA cities in terms of scientific research output but, being limited by the number of sci-tech enterprises, has found it difficult to commercialise sci-tech achievements.[13] "R&D in Macao + Commercialisation in Hengqin" is the new mode of co-operation in sci-tech innovation that is being explored by both places. As at November 2024, the co-operation zone encompassed 30 national and provincial sci-tech innovation platforms and incubated more than 10,000 sci-tech enterprises.[13]

Spurred on by public policy and with support from relevant market players, the GBA witnessed remarkable growth in sci-tech and related industries, which serve as vehicles for New Quality Productive Forces.

GBA's achievement in the sci-tech areas and related industries

Sci-tech competitiveness

- The Global Innovation Index has ranked the Shenzhen–Hong Kong–Guangzhou sci-tech cluster second in the world's sci-tech clusters for five consecutive years and included the Macao SAR–Zhuhai cluster in the world's top 100 sci-tech clusters for the first time in 2024.[14]
- In the first ten months of 2024, the number of patents authorised for inventions in strategic industries in Guangdong Province was approximately 93,200 representing a year-on-year increase of 25%, ranking the province in first place in China.[15]

Development in the sci-tech-related industries

- To date, Guangdong Province has around 77 thousand high-tech enterprises, ranking it first in the country.[16]
- In the first three quarters of 2024, the added value of the advanced manufacturing and the high-tech manufacturing sectors in Guangdong Province increased 6.9% and 11.6% year-on-year, respectively.[17]

The trade-in-of consumer goods can stimulate the development of New Quality Productive Forces from the consumer end. The "trade-in-of consumer goods" policy encourages consumers to trade-in old consumer goods for those with intelligent and environmental features, such as environmentally friendly household appliances, new energy vehicles (NEVs), or fuel vehicles with low displacement engines. As more consumers participate in the trade-in program, the growing demand for green products and the proper disposal of old goods will promote the development of green consumer goods industries and the recycling sector.

In January 2025, Guangdong Province updated its "trade-in" policy to include four new categories of domestic appliances in the subsidy program, including microwaves and dishwashers. Manufacturers and retailers within the GBA, particularly those specialising in the newly added categories, are expected to benefit significantly from this policy update.

Financial support by the governments

- In addition to supporting the large-scale equipment renewals, as mentioned in the Policy section, the central government allocated another batch of **ultra-long special treasury bonds of RMB150 billion** in July 2024, to support the trade-in program.
- In early 2025, the central government earmarked **RMB81 billion** for the consumer goods trade-in program. Guangdong Province government aims to utilise the funds of RMB6.5 billion received from the central government to support the new round of trade-in program.

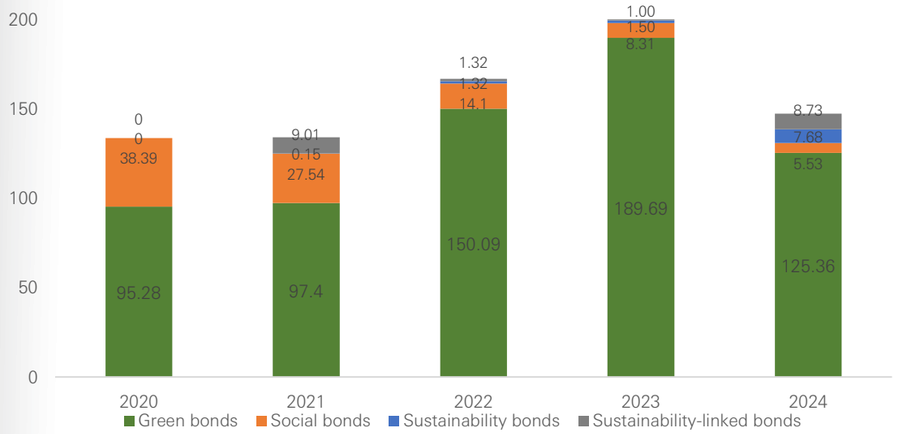
According to public data, as of the end of October 2024, the sales volume of trade-in household appliances reached RMB14.98 billion with over 3.7 million household appliances sold within Guangdong Province.[18] With regard to trade-in vehicles, the Chinese central government stated that in 2024, NEVs accounted for over 60% of the overall number of trade-in vehicles.[19] The policy of trade-in-of consumer goods bolsters consumption recovery, and, at the same time, promotes the development of green industries. For instance, Guangdong province's output of NEVs increased by 85% in the first 11 months of 2024.[20]

Green and Sustainable Finance

The volume of GSSS bonds issued by the GBA in 2024 was RMB147.30 billion; a 27% decrease year-on-year.

According to our study, a significant decrease in the issuance volume by the Hong Kong government was the primary reason. That being said, the government was still a significant contributor, accounting for 26% of the GBA's total issuance during the year. Additionally, the volume of green and social bonds both decreased in 2024. At the same time, the volumes of sustainability bonds and sustainability-linked bonds grew significantly, with a fourfold- and sevenfold-increase, respectively.

Figure 5. Issuance volume of GSSS bonds within the GBA (RMB billions)



Note: GSSS bonds issued within the GBA refer to both onshore and offshore GSSS bonds issued by entities registered or primarily operating within the GBA
Source: Wind, CECEPEC

As mentioned above, direct support from the Hong Kong government for GSSS bonds declined in 2024, with a 70% decrease year-on-year in the issuance volume. In 2023, the Hong Kong government issued GSSS Bonds to the value of HKD110 billion. The corresponding figure for 2024 was HKD31 billion. Looking at previous issuance volumes we observed that there have been significant fluctuations over the past several years. Specifically, the issuance volume in 2023 was significantly higher than that in all other periods since the launch of the Government Green Bond Programme[xii] in 2018. Additionally, we found that the proportion of the Hong Kong government's GSSS bonds denominated in RMB increased from around 30% in 2023 to 40% in 2024, within the context of a strong USD and relatively weak RMB.

With regard to governments within the PRD, our study observed that the government of Guangdong Province and that of Shenzhen have become more active in issuing offshore RMB GSSS bonds in Hong Kong and Macao. According to public data, the GSSS bonds issued by governments within the PRD cities were all denominated in RMB in the past years.

The People's Government of Guangdong Province

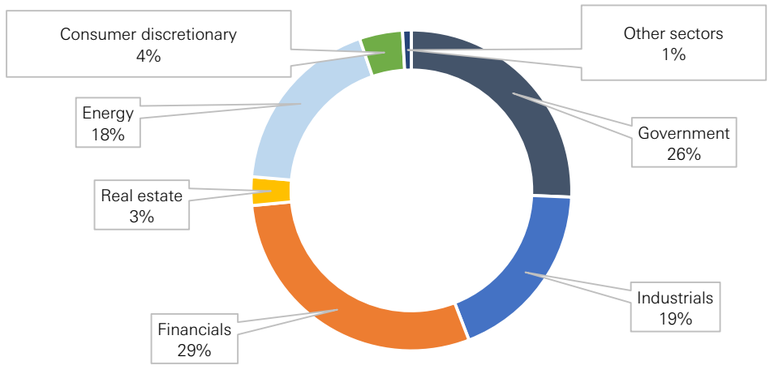
- In Q3 2024, the People's Government of Guangdong Province issued offshore RMB local government bonds in Hong Kong and Macao, separately. Specifically, it was the first time for the People's Government of Guangdong Province to issue green bonds in Hong Kong and the second time in Macao, with an amount of RMB1.5 billion at each market respectively.

Shenzhen municipal government

- In Q3 2024, the Shenzhen municipal government issued offshore RMB-denominated bonds in Hong Kong for the fourth time since 2021. The amount was RMB7 billion, with social, green and sustainability bonds accounting for RMB4.6 billion of the total.

On looking at the various sectors, our study observed that the total issuance volume by sector (excluding governments) experienced a year-on-year increase of 33% in 2024. It is worth noting that, in 2024, the financials sector overtook the government as the most significant source of GSSS bonds within the GBA. According to our study, in 2024, the volume of GSSS bonds issued by the financials sector was RMB43.22 billion, accounting for approximately 29% of the total issuance volume within the GBA.

Figure 6. Issuance volume of GSSS bonds by government and sectors within the GBA in 2024

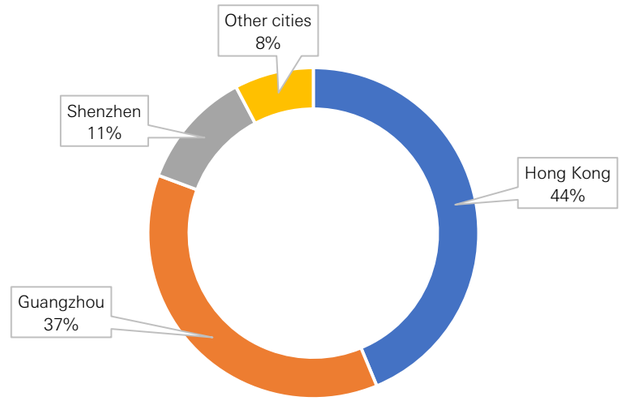


Note: The proportion refers to the issuance volume by the specific type of issuer / the GBA's total issuance volume
Source: Wind, CECEPEC

xii. The Government Green Bond Programme has been renamed as the Government Sustainable Bond Programme with effect from 10 May 2024(Source).

Hong Kong, Guangzhou, and Shenzhen are the primary issuers of GSSS bonds within the GBA, accounting for around 92% of the GBA's total volume, reaching RMB131.84 billion in 2024. At the same time, our study found that other GBA cities' involvement in the GSSS bond market has grown. In 2024, the total issuance volume of other GBA cities, excluding Hong Kong, Guangzhou and Shenzhen, was RMB11.41 billion, nearly triple the volume of 2023.

Figure 7. Issuance volume of GSSS bonds by the GBA cities in 2024



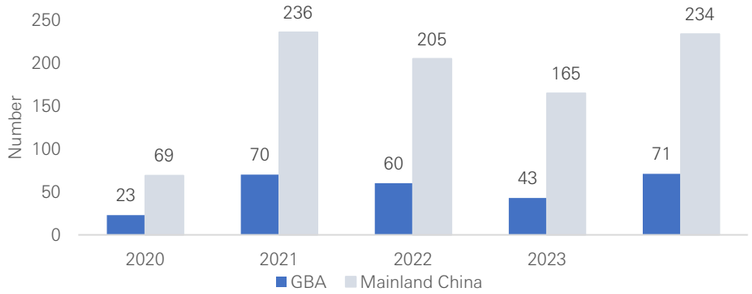
Note 1: The proportion refers to the issuance volume by the specific city / the GBA's total issuance volume
Note 2: GSSS bonds issued by a specific city refer to both onshore and offshore GSSS bonds issued by entities registered or primarily operating within the city.
Source: Wind, CECEPEC

Our study observes an increasing number of launches of ESG mutual funds within mainland China and a similar trend across the GBA(as shown in Figure 8). It is worth noting that the new launches of ESG mutual funds by fund management companies based in the GBA reached a new high in 2024, primarily due to a large number of ESG mutual funds being launched in Q4 2024.

Additionally, our study observed that in both 2023 and 2024 fund management companies based in Shenzhen were more active in launching ESG mutual funds than those based in other GBA cities accounting for 73% in 2024 and 56% in 2023 of the new launches in the GBA. With regard to the type of ESG mutual fund, the primary type was pure ESG fund[xiii] which accounted for 60% of the PRD's new launches in 2024. Environmental themed funds[xiv] which accounted for 25% were in second place.

xiii. Pure ESG mutual fund: Incorporate all three dimensions, i.e., environmental, social and governance, into their investment strategies(Source).
xiv. Environmental themed fund: Incorporate the environmental dimension into the investment strategies(Source).

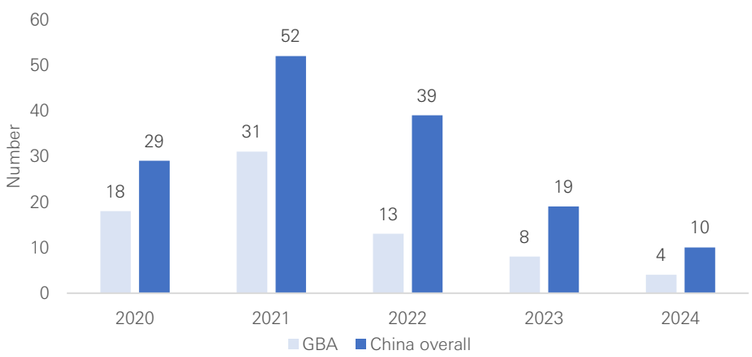
Figure 8. ESG mutual funds newly launched by fund management companies in mainland China and within the GBA



Source: Wind, CECEPEC

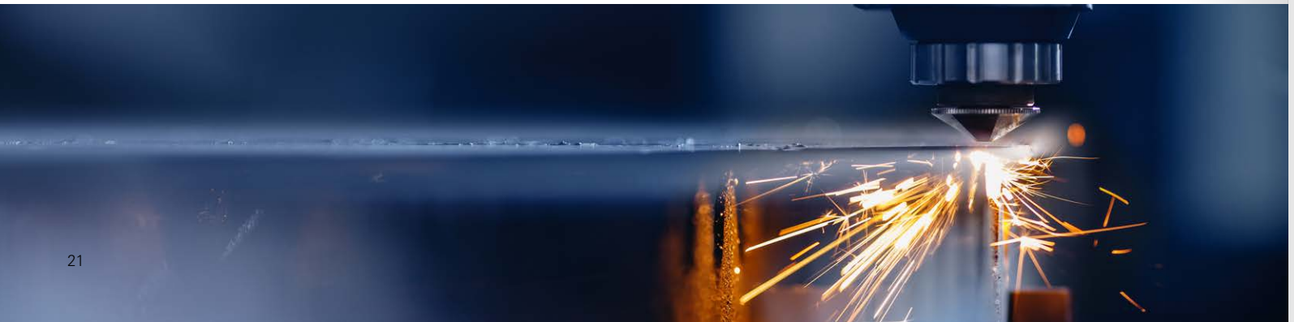
Our study observed that the rate of new signatories to the Principles for Responsible Investment (PRI)[xv] within China, including the GBA, in the past two years slowed. This trend may be attributed to the market saturation phenomenon, where many leading institutions have proactively signed the PRI in previous years, resulting in a natural slowdown in the growth of new signatories. In 2024, there were only ten new signatories within China, 40% from the GBA. Among the four new signatories within the GBA, three are from Hong Kong and one from Zhuhai.

Figure 9. New signatories to the PRI in China overall and within the GBA



Note: New signatories in China or within the GBA refer to new signatories registered or primarily operating in China or within the GBA. The data covers investment managers and asset owners.
Source: UN PRI, CECEPEC

xv. PRI is an international organisation that works to promote the incorporation of environmental, social, and corporate governance factors into investment decision-making



In 2024, the GBA, especially Hong Kong, took a series of measures to perfect its green and sustainable finance system, such as providing subsidies, establishing standards, and formulating long-term plans.

The Green and Sustainable Finance Grant Scheme (the "Scheme") is a typical mechanism launched by the Hong Kong Monetary Authority (HKMA) to lower issuers' and borrowers' costs in the green and sustainable financing market by providing subsidies. In 2024, HKMA extended the Scheme by three years to 2027 and expanded the scope of subsidies to cover **transition financing** instruments. Additionally, the release of the Hong Kong Taxonomy for Sustainable Finance is a milestone for Hong Kong, being a tool for informed decision-making on green and sustainable finance. According to the HKMA, it plans to expand coverage of the taxonomy to include **transition activities**. We notice that Hong Kong has paid increasing attention to transition finance. In the section on GBA ESG Industry Sub-indices, we provide a detailed analysis of transition finance.

The Action Agenda focuses on the following four areas:

- Banking for net zero
- Investing in a sustainable future
- Financing net zero
- Making sustainability more inclusive by supporting high-quality and comprehensive sustainability disclosures, and closing talent and knowledge gaps in sustainable finance in the region.

In Q4 2024, the HKMA launched the Sustainable Finance Action Agenda (Action Agenda) in Q4 2024 setting out its vision to support the sustainable development of Asia.

Corporate Governance

In 2024, China, including the GBA, published a number of documents to enhance the ESG and sustainability disclosure.

Our 2024 quarterly reports tracked the ESG and sustainability disclosure standards or guidelines unveiled from Q1 to Q3 2024 and analysed several significant documents. The ESG standard system continued to be perfected in Q4. For example, three stock exchanges within mainland China issued a consultation paper on the Sustainability Disclosure Guidance in November to provide a set of implementation methods for listed companies. Another significant document - the Basic Standards of the Corporate Sustainability Disclosure Standards (Trial) was issued in December. The Hong Kong government launched a roadmap on sustainability disclosure in the city in December setting out a transparent and well-defined pathway for the sustainability reporting of publicly accountable entities.

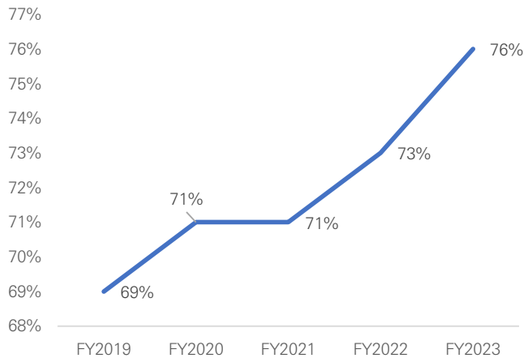
This report includes a new section, namely Wrap-up of Corporate Governance, in which we review the GBA's development as regards ESG and sustainability disclosure over the period studied. At the same time, we also review international and national trends in corporate governance over the past several years.

Wrap-up of Corporate Governance

An increasing proportion of the listed GBA companies have been making ESG disclosures during the period in question. Our study keeps track of the ESG disclosure rate of the listed GBA companies[xvi] by assessing whether ESG and other related non-financial reports[xvii] are published by these companies per annum. As shown in Figure 10, the ESG disclosure rate among listed GBA companies represents an increase from 69% in FY2019 to 76% in FY2023. When we take a further look at the GBA cities[xviii], we see that the ESG disclosure rate of all cities continually improved over the past five years.

xvi. "Listed GBA companies" refer to listed companies registered or primarily operating in the GBA, which are listed in Hong Kong, Shenzhen, or overseas stock exchanges.
xvii. These include sustainability reports and corporate social responsibility (CSR) reports, which all contain non-financial information.
xviii. When calculating the ESG disclosure rate of a specific city, we assess the proportion of listed companies registered or primarily operating in the city that make ESG disclosures.

Figure 10. The overall ESG disclosure rate of listed GBA companies



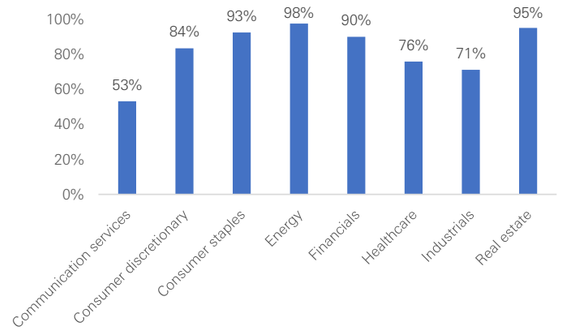
Note: We conducted a study of over 2000 GBA-listed companies to ascertain which had published ESG and other related non-financial reports in each financial year.
Source: Public sources, CECEPEC

Key findings based on the study:

- **Hong Kong** and **Macao** have always led in ESG disclosure rates within the GBA.
  - **Hong Kong** has continuously led the way with 95% from FY2019 to FY2023, and a new high of 97% in FY2023.
  - **Macao** increased from 68% to 94% in FY2023.
- Differences in the disclosure rates of the nine **PRD municipalities within the GBA** have gradually decreased.
- Two PRD municipalities achieved ESG disclosure rates of over 50% in FY2023, namely **Guangzhou**(57%), and **Zhongshan**(54%).

ESG disclosure rate is one of the indicators under the GBA ESG Industry Sub-indices. Figure 11 shows the ESG disclosure rates for the eight key sectors included in our study in FY2023.

Figure 11. ESG disclosure rate of listed GBA companies by sectors in FY2023



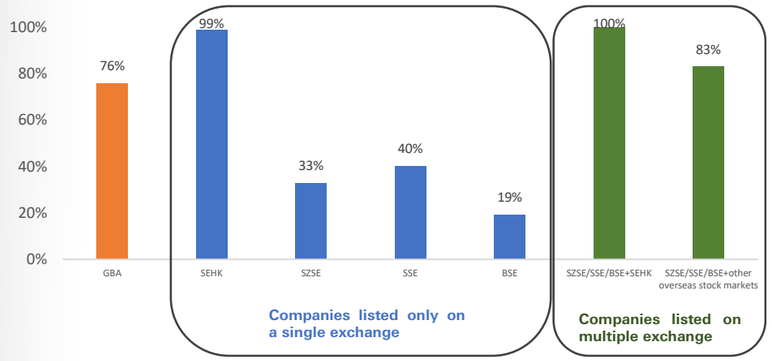
Source: Public sources, CECEPEC

Key findings based on the study:

- Four sectors, namely consumer staples, energy, financials, and real estate, have consistently had higher disclosure rates than the remaining sectors over the past several years.
- In FY2023, most sectors achieved disclosure rates higher than the average for all GBA listed companies which was 76%.

In the study on the GBA's disclosure rates in FY2023, we looked at the ESG disclosure rate of listed GBA companies by stock exchange and in our report dated July 2024 we carried out a detailed analysis. Figure 12 shows the ESG disclosure rate of listed GBA companies by stock market. In the section on the GBA ESG Sub-indices by Company Size, we look in greater detail at the ESG disclosure quality of listed GBA companies. Based on our comprehensive study we can safely conclude that **mandatory ESG disclosure leads to a high ESG disclosure rate and an improvement in ESG reporting quality**.

Figure 12. ESG disclosure rate of listed GBA companies by stock market for FY2023



Note: The ESG disclosure rate of companies listed only on SEHK was 99% instead of 100%, as some companies announced a delay in publishing ESG reports for FY2023.
Source: Public sources, CECEPEC

Key findings based on the study:

- The ESG disclosure rate of companies listed on SEHK was about 100%.
- The ESG disclosure rates of those listed only on either the SZSE, the SSE, or the BSE were significantly lower than the average rate, 76%, of all GBA-listed companies in FY2023.

The section on GBA ESG Sub-indices by Company Size gives details on the ESG disclosure quality of the GBA listed companies based on our analysis of companies included in the sample. Our study observed the GBA companies sampled performed better in the environmental, social, and corporate governance pillars over the past several years. For more details, please refer to the section on GBA ESG Sub-indices by Company Size.

Over the past several years, regulatory bodies and international organisations have continuously promoted the establishment of the ESG standard system. SESZ and SEHK, the two stock exchanges within the GBA, have taken responsibility for establishing ESG standards for listed companies, following national policies and in line with international trends. In this report, we review the main ESG standards published internationally and in mainland China, and Hong Kong over the past several years (as shown in Figure 13), and summarise trends in ESG standards.

International market

Unified sets of ESG disclosure standards and ESG implementation principles have been preliminarily established.

- In June 2023, the International Sustainability Standards Board (ISSB) published two standards on sustainability disclosure: IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures (ISSB Standards). The ISSB Standards integrate existing frameworks in the international market, such as the Global Reporting Initiative (GRI), Task Force on Climate-related Financial Disclosures (TCFD), etc. The combination provides a unified framework that companies around the world can use.
- In November 2024, the ISO ESG Implementation Principles was launched by the International Organisation for Standardisation (ISO) at COP29. These principles serve as a universal language for ESG practice, establishing an international reference model that ensures global interoperability and reliability in ESG reporting and practices.[21]

Mainland China

Mainland China made great strides in establishing an ESG standards system in 2024, with the aim of establishing a nationwide standard by 2030.

- Initially mainland China proposed disclosure requirements for financial institutions, with a focus on environmental and green finance. In 2023, mainland China published comprehensive standards, paying equal attention to all pillars under ESG. In 2024, mainland China increased the pace and issued several landmark documents, as shown in Figure 13.
- Central state-owned enterprises (SOEs) have led ESG and sustainability within mainland China. Central government paid attention to the leading role of SOEs and, since 2022, has accelerated the ESG development of SOEs and that of listed companies majority-owned by SOEs. In 2023, ESG reporting disclosure guidelines for listed companies majority-owned by SOEs were unveiled. The State-owned Assets Supervision and Administration Commission of the State Council (SASAC) is in the process of establishing the ESG evaluation system for listed companies majority-owned by SOEs.
- In 2024, mainland China set out its goal of establishing standards for general corporate sustainability disclosure and climate-specific disclosure by 2027 and establishing a nationwide standard by 2030. The Chinese MOF stated that a one-size-fits-all mandatory approach will not be adopted. It aims to gradually extend from listed companies to non-listed companies, from large companies to small- and medium-sized enterprises, from qualitative to quantitative disclosure, and from voluntary to mandatory disclosure.

Hong Kong

Hong Kong has updated its ESG disclosure standards from time to time, with increasingly stringent requirements, especially in climate-related issues. Additionally, Hong Kong is in the process of becoming one of the first jurisdictions to align local sustainability disclosure requirements with ISSB standards.

- In 2019, SEHK issued updated ESG reporting guidelines. The main changes in the updated version include making boards of directors increasingly responsible for ESG management and new disclosure requirements relating to climate change.
- The requirements for climate-related issues are increasingly stringent. In 2024, SEHK unveiled a new set of rules mandating climate-related disclosure (hereinafter referred to as the "New Climate Requirements").
- In December 2024, the Hong Kong Institute of Certified Public Accountants (HKICPA) published HKFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and HKFRS S2 Climate-related Disclosures (HKFRS Sustainability Disclosure Standards), which are fully aligned with the ISSB Standards, with an effective date of 1 August 2025

Figure 13. Critical ESG standards in the international market, mainland China, and Hong Kong

Year	International market	Mainland China	Hong Kong
2024	• November: ISO ESG Implementation Principles launched by ISO.	• December: Basic Standards of the Corporate Sustainability Disclosure Standards (Trial) unveiled by Chinese MOF, in collaboration with nine other departments. • November: Consultation paper on the Sustainability Disclosure Guidance issued by SESZ, SSE, and BSE, respectively. • April: Guidelines on Self-Regulation of Listed Companies – Sustainability Report (Trail) issued by SESZ, SSE, and BSE, respectively.	• December: HKFRS Sustainability Disclosure Standards issued by HKICPA. • December: A roadmap on sustainability disclosure in Hong Kong launched by the Hong Kong government. • April: ESG Reporting Code, including the "New Climate Requirements issued by SEHK.
2023	• September: TNFD Recommendations on Natural-Related Issues unveiled by the Taskforce on TNFD. • June: ISSB Standards issued by ISSB.	• August: Note on Promoting Research on ESG Reporting for Listed Companies Owned by Stated-Owned Enterprises issued by SASAC.	• December: Consultation paper on the enhancement of climate-related disclosures under the ESG framework issued by SEHK.
2019 ~ 2022	/	• 2022: Guidelines for Environmental Information Disclosure of Financial Institutions issued by Shenzhen. • 2021: Guidance for Environmental Information Disclosure of Financial Institutions issued by PBOC.	• 2019: ESG Reporting Guide 2020 issued by SEHK.

Source: Pubilc sources

In our previous report dated July 2024, we conducted a comparative analysis between mainland China's sustainability disclosure guidelines for listed companies (hereinafter referred to as the "Guidelines") and Hong Kong's ESG code. Based on the comparative analysis, we observed some commonalities and differences between the Guidelines and the ESG Code some of which are listed below. For more details, please refer to the report dated July 2024.

Primary commonalities and differences between two sets of ESG standards

- **Scope:** Under the Guidelines, only certain groups must comply with the mandatory reporting requirements, such as companies in the Shenzhen 100 Index, SSE 180 Index, and dual-listed companies. However, the mandatory reporting requirements of the ESG code apply to all companies listed on SEHK.
- **Reporting principles:** The Guidelines and the ESG code both set out the reporting principles of materiality, quantitative, balance, and consistency. However, the Guidelines emphasise the principle of double materiality (financial materiality and impact materiality) when companies identify material sustainability issues while the ESG code requires listed companies to adopt the impact materiality approach to identify material ESG issues and consider the financial impact when disclosing climate-related risks and opportunities.
- **Coverage of ESG and sustainability issues:** The ESG and sustainability issues covered by the Guidelines and the ESG Code are basically consistent. Minor differences exist. For example, Indicators related to the revitalisation of rural areas and driving innovation are included in the Guidelines but not in the ESG Code.

As previously mentioned, Hong Kong has increased the emphasis on climate-related issues and added the New Climate Requirements to the ESG Code. Mainland China also pays great attention to climate-related issues. According to the Consultation paper on Sustainability Disclosure Guidance issued by SESZ, SSE, and BSE, respectively, the response to climate change has double materiality. Given the materiality of climate change, three stock exchanges within mainland China all established a separate section or document, providing detailed guidance for disclosing climate change.

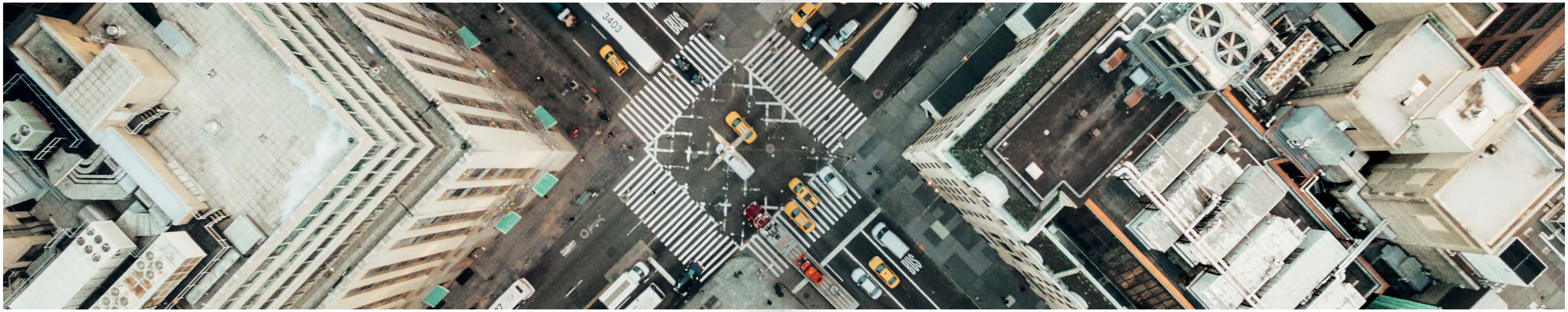
Our study also conducted a comparative analysis of the disclosure requirements or guidelines of the climate-related issues set out in the Guidelines and ESG Code. The reporting frameworks for climate-related issues as set out in the Guidelines and ESG Code are basically consistent and contain four elements, i.e., Governance, Strategy, Risk Management[xix], and Metrics and Targets. The primary commonalities and differences are listed in Figure 14.

Figure 14. The comparative analysis of the disclosure requirements for climate-related issues set by Guidelines and ESG Code

Elements	Primary Commonalities and Differences	Guidelines	ESG Code
Governance	Basically consistent	Both contain the requirements of disclosing the governance structure of managing climate-related impact, risks and opportunities.	
	Differences	No requirements for disclosing the remuneration linked to climate.	Companies shall disclose the remuneration linked to climate.
Strategy	Commonalities	Companies shall disclose: ◆ The climate risks and opportunities identified and their effect, including the financial impact, and the effect on the companies' strategies and decision-making. ◆ Transition plan for responding to the climate risks and opportunities.	
	Differences	Companies shall disclose the effects of climate change on their **business model**.	Companies shall disclose the effects of climate change on their **business model and value chain**.
		Companies are **encouraged** to conduct scenario analysis.	Companies are **required** to conduct scenario analysis.
Risk Management (Impact, Risk and Opportunity Management)	Basically consistent	Both contain the requirements of disclosing the processes to identify, assess, and manage climate-related impact, risks and opportunities.	
Metrics and Targets	Commonalities	Companies shall disclose: ◆ Scope 1 and Scope 2 GHG emissions. ◆ Information on carbon credits if the companies use these.	
	Differences	Companies are **encouraged** to disclose Scope 3 GHG emissions.	Companies are **required** to disclose Scope 3 GHG emissions.
		Companies are encouraged to engage a third-party organisation to conduct carbon verification.	No relevant requirements.

Source: Guidelines, ESG Code, CECEPEC

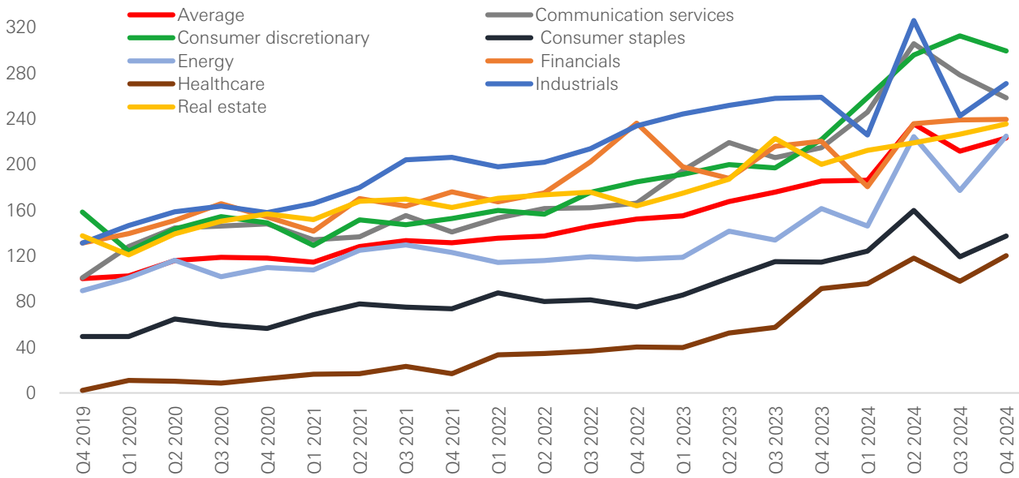
xix. The third element is named as the Risk Management and the Impact, Risk and Opportunity Management in the ESG Code and Guidelines, respectively.



GBA ESG Industry Sub-indices

GBA ESG Industry Sub-indices

Figure 15. Relative ESG performance evolution of the eight sectors



Note: The average value of the GBA ESG Industry Sub-indices was set at 100.00 for Q4 2019 (base period), as a benchmark with which to compare each key sector's individual ESG performances as well as their average performance.

Source: China's official statistical database, public sources, CECEPEC

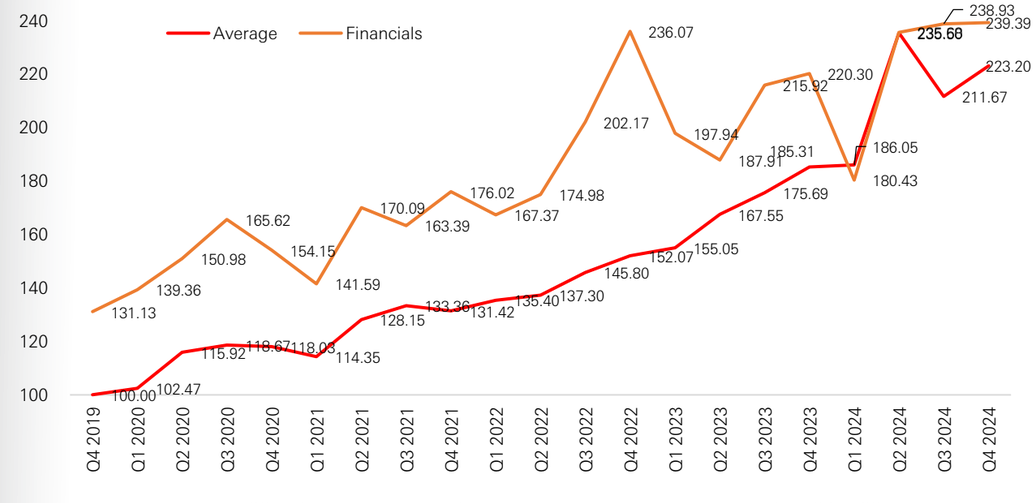
Our study found that in 2024 the average value of the GBA ESG Industry Sub-indices trended upwards with some fluctuations. In Q4 2024, it reached 223.20 which represented a year-on-year increase of 20%. As per Figure 15, all sectors experienced overall growth in 2024 compared with the previous year. It is worth noting that, the consumer discretionary sector experienced significant improvements in 2024, and was the best performing of the eight key sectors. The two primary drivers for this improvement were better performance in climate-related areas and stronger policy support for the consumer discretionary sector.

Case Study:

Financials

The financials sector, a significant pillar within the GBA, plays a leading role in the transition towards a sustainable economy. In our previous report dated January 2024, we analysed the role of the financials sector in promoting the green development of other sectors. In addition to detailing the overall ESG performance of the financials sector within the GBA in 2024, the present report also contains an analysis of transition finance, a hot topic in the area of sustainable finance.

Figure 16. GBA ESG Sub-index – Financials



Note: The line chart shows the ESG performance evolution of the financials sector. The average value of the GBA ESG Industry Sub-indices was set at 100.00 for Q4 2019 (base period).
Source: China's official statistical database, Wind, public sources, public disclosures of listed companies, CECEPEC

Figure 16 shows the overall ESG performance of the financials sector within the GBA over the period in question. Our study found that in Q1 2024, the financials sector declined significantly compared with Q4 2023, mainly due to a decrease in the issuance of GSSS bonds. However, in the following three quarters, the sector performed better, primarily due to increased activity in the GSSS bond market and the unveiling of a greater number of policies to support the sector's development.

The financials sector has always been one of the main contributors to the GSSS bond issuance within the GBA. Figure 17 shows the value of GSSS bonds issued by the financials sectors over the previous five years. Our study observed that in 2024, the financials sector was the most active issuer in the GSSS bond market within the GBA, accounting for around 30% of the regional yearly issuance volume.

Figure 17. GSSS bonds issued by the GBA's financials sector

	GSSS bonds issued by the GBA's financials sector (RMB billion)	Percentage by the GBA's total issuance
2024	43.22	29%
2023	37.09	18%
2022	66.81	40%
2021	22.76	17%
2020	13.22	10%

Source: Wind, CECEPEC

Topic: Transition Finance

Transition finance bridges the gap between traditional and green financing in the transition to decarbonisation.

2015 marked a turning point in the world with regard to combating climate change and the transition to sustainability. In 2015, the first universal climate agreement, the Paris Agreement, was agreed. In the same year, the United Nations established Agenda 2030 for Sustainable Development. Since then, green finance has become widely recognised as an efficient tool to channel capital towards green sectors and projects which have clear environmental benefits.

However, in recent years, the market has realised that green finance alone is not sufficient to achieve the goal of net-zero. Much more financing is required for the effective decarbonisation of the entire economy, especially for **high emitting and hard-to-abate sectors**.

According to estimates produced by Bloomberg's New Energy Finance, the world needs investment totalling USD92 trillion to achieve the goals of the Paris Agreement.[23] In China, the Climate Bonds Initiatives (CBI) state that though there is no consensus of the scale of transition finance required in China, estimates indicate that to reach carbon neutrality by 2060 100 trillion RMB may be required.[23] Figure 18 shows the estimated funds needed by financial institutions for the high-emitting and hard-to-abate sectors within China. Transition finance has emerged as a key player in sustainable finance to meet this demand.

What are hard-to-abate sectors?

According to the Organisation for Economic Co-operation and Development (OECD), the term "hard-to-abate" generally refers to sectors that face particular challenges in their low-carbon transition, notably either due to an absence of low-carbon alternatives (as is the case in aviation, for example) or due to currently high costs of fully transitioning to low-carbon technologies and energy sources, as is the case in energy-intensive industries with high-temperature processes, such as iron and steel, cement and lime, chemicals, aluminium and other non-metallic minerals.[22]

Figure 18. The estimated amount of funds needed for the high-emitting and hard-to-abate sectors within China

Sector	Estimated funds needed in two periods (RMB trillion)		Total estimated funds needed from 2021-2060 (RMB trillion)
	2021-2030	2023-2060	
Electricity	9.8	57.6	67.4
Transportation	6.3	31.1	37.4
Building	3.9	18.4	22.3
Steel	1.1	2	3.1
Agriculture	0.7	2.9	3.6
Cement	0.3	0.6	0.9
Chemical	0.2	3.9	4.1

Source: China International Capital Corporation Limited, public sources, CECEPEC

To date, there is no internationally agreed definition of transition finance, however, the generally agreed characteristics are as follows:

Generally agreed characteristic of transition finance
Transition finance:

- Primarily supports the transition of high-emitting and/or hard-to-abate sectors.
- Has, to date, been focused on climate mitigation.
- Aims to support the transition in a way that is aligned with the goals of the Paris Agreement.
- Can be used to support two types of transition – entity-level transition and activity-level transition.

Figure 19 gives relevant definitions of transition finance.

Figure 19. Examples of definitions of transition finance by different international organisations/ working groups

International organisation	Definition
OECD	Transition finance is understood as finance deployed or raised by corporates to implement their net-zero transition, in line with the temperature goal of the Paris Agreement and based on credible corporate climate transition plans.
International Capital Market Association (ICMA)	Climate transition financing should be sought by an issuer to fund GHG emissions reduction of its "core" business activities over time or diversify into new low-carbon business activities.
G20 Sustainable Finance Working Group	Transition finance refers to financial services supporting the whole-of-economy transition, in the context of the Sustainable Development Goals (SDGs), towards lower and net-zero emissions and climate resilience, in a way that is aligned with the goals of the Paris Agreement.
CBI	The transition label is used for investments that: are making a substantial contribution to halving global emissions by 2030 and reaching net zero by 2050, but do not have a long-term role to play; or will have a long-term role to play, but at present, the pathway to net zero is not certain.

Source: Public source

High-emitting and hard-to-abate sectors, including petrochemicals, building materials, aviation and shipping industries, are significant pillars of the GBA economy and transition finance is required to transition them towards low-carbon.

Secondary industry, especially the manufacturing industry, constitutes a significant portion of the economy of Guangdong Province. According to public data, in the first three quarters of 2024, the secondary industry made up 40% of the province's GDP of which the manufacturing industry accounted for approximately 68%.[24] [25] As previously mentioned, high-emitting and hard-to-abate sectors such as petrochemical and building materials are an important part of Guangdong's economy. In fact, green petrochemicals and advanced materials (including building materials such as cement and ceramics) are two of the eight trillion-level industrial clusters of Guangdong.

Data on high-emitting and/or hard-to-abate sectors in Guangdong Province

- In the first three quarters of 2024, the petrochemical industry constituted around 10% (about RMB40 million)[xx] of the total value of the manufacturing industry in Guangdong Province.
- The province is a leader in the production of advanced materials including building materials such as cement and ceramics. Indeed, Guangdong Province was ranked first in the country in the production of cement in 2023.[26] Also, in 2023, Foshan accounted for 10% of the national production of ceramics[xxi].[27]

xx. The total added value of RMB40 million is the sum of the added values of five sub-sectors, including (a) petroleum, coal, and other fuel processing industries, (b) chemical raw material and chemical product manufacturing industries, (c) chemical fibre manufacturing industry, (d) rubber and plastic product industry and (e) non-metallic mineral product industry.
xxi. Ceramics refers to ceramic tiles and sanitary ceramics products.

Aviation and **shipping** are also strategic sectors within the GBA. In 2023, the ports of Shenzhen, Guangzhou and Hong Kong ranked among the top 10 of the world's top 100 ports in terms of freight traffic.[28] The airport cluster centred around the airports of Guangzhou, Shenzhen and Hong Kong attracted 180 million passengers in 2023.[28]

To achieve provincial and national dual carbon goals, these high-emitting and hard-to-abate industries are required to undergo a low-carbon transition in a systematic and scientific manner, primarily by adopting climate technology[xxii]. The transition pathway and relevant climate technology for realising the transition of certain high-emitting and/or hard-to-abate sectors in the GBA are explained below:

Petrochemicals industry:

Carbon emissions within the petrochemical industry primarily come from reaction processes and energy consumption. The principal means of reducing emissions are improvements in efficiency, fuel and raw material substitution, and end-point reduction. It is worth noting that in China the electrification of petrochemical facilities remains low, which means that this area has great potential. Raw material substitution could be achieved by using hydrogen, especially green hydrogen, instead of coal to produce petrochemical products such as methanol and ammonia. Research from the World Economic Forum (the Research) shows that the most significant technology pathways for the chemical industry are CCUS and the use of green hydrogen.[29]

Building Materials (Cement, Glass and Ceramics):

The decarbonisation pathway of construction materials consists of fuel and raw material substitution, improved energy efficiency, and the use of CCUS technology. In this context, coal has been substituted with natural gas in the production of construction materials. In the case of the cement industry, the top mitigation technologies identified by the Research are CCUS and improving material efficiency by reducing the amount of clinker used.[29]

Aviation & Shipping:

The decarbonisation of shipping is expected to create significant demand for financing and investment due to the increasing use of substitute fuels, such as LNG, battery/mix-power, and hydrogen fuel. Top mitigation technologies are the use of ammonia and hydrogen as substitute fuel and improving energy efficiency.[29] In the aviation sector, top mitigation technologies are promoting SAF[29] which has a lower carbon emission throughout the lifecycle compared to traditional jet fuel and improving the efficiency of engines.[30]

The transition pathway and technology means needed for the low-carbon transition of the abovementioned industries are summarised in the table below. We observed that means, such as enhancing efficiency by upgrading equipment have been adopted widely in the GBA. As mentioned in the Policy section, the equipment upgrades in the directions of energy conservation and emission reduction, and ultra-low emissions are encouraged by the policy of large-scale equipment renewals. Additionally, some advanced means such as SAF and CCUS, are being explored within the GBA.

Figure 20. Transition Pathway and Technology Means for Selected Industries

	Petrochemicals	Building Materials	Aviation / Shipping
Fuel substitution	/	◆ Natural gas as a substitute for coal ◆ Use of zero-carbon chemical fuels such as hydrogen and green methanol	◆ Aviation: SAF ◆ Shipping: use of LNG, green ammonia, methanol and hydrogen fuel
Raw material substitution	Use of biomass or hydrogen as raw material for chemical products	Use of low-carbon clinker[xxiii]	/
Other pathways and technology	◆ Enhancing Efficiency – Upgrade and energy-saving renovation of key and general energy-consuming equipment. ◆ Use of CCUS to capture CO2 directly from emission sources. ◆ Electrification - Switch end-use equipment from fossil fuel-powered to electric-powered.		
Key Players that need to adopt climate technologies	◆ Manufacturers especially Multinational Corporations and leading SOEs	◆ Material Manufacturers	Aviation: ◆ Airlines Shipping: ◆ Ship owner ◆ Ship operator ◆ Port operator

xxii. According to the definition of the United Nations, climate technology encompasses solutions to mitigate or adapt to climate change, ranging from GHG reduction technology, renewable energy, and adaptation infrastructure, to soft technology such as energy-efficient practices(Source).
xxiii. Cement clinker is the intermediate goods of cement.

To facilitate financial support for the transition of high-emitting and hard-to-abate sectors, the Chinese central government promoted the establishment of transition finance standards. In March 2024, China issued guidelines to strengthen financial support for green and low-carbon development. These guidelines highlight the importance of financial support for the low-carbon transition of high-emitting sectors and projects, and propose accelerating the standards of transition finance. Since 2022, PBOC has taken the lead in establishing transition finance taxonomies for high-emitting and hard-to-abate sectors, with the aim of encouraging these sectors to achieve the transition, while also providing an essential reference for financial institutions when providing transition finance services. To date, PBOC has established its first batch of taxonomies for four sectors: steel, building materials, agriculture, and thermal power. A new batch of taxonomies is under development, which covers the other seven sectors – water transportation, copper, aluminium, chemical, petrochemical, textile, and ceramics. The central government also encourages different regions or cities to formulate local transition finance taxonomies taking into consideration the local industrial structure.

The financial leasing industry also plays an important role in this transition. In August 2024, the National Financial Regulatory Administration (NFRA) issued a notice regarding the encouragement list, negative list, and project company's positive list for the business development of financial leasing companies (The Notice). The Notice requires financial leasing companies to adjust their business structure and plan according to the lists. The projects designed to support the upgrading and development of high-emitting and hard-to-abate sectors such as the coal, steel, and petrochemical industries are set out in the encouragement list.

In line with national efforts, certain provinces, cities, or districts within China, including Guangdong Province, began issuing local transition finance taxonomies from 2023 onwards. In September 2024, Guangdong Province issued the transition finance taxonomy for the ceramics industry, the first of its kind in China.[31] Local transition finance standards for the building materials and shipping industries are under development. Though the Hong Kong Taxonomy issued in May 2024 does not yet cover transition activities, the HKMA plans to include transition activities in the upcoming version.

Guangdong Province's transition finance taxonomy for the ceramics industry

For Guangdong Province to achieve its dual-carbon goal it is imperative that ceramics industry which has high energy intensity and emissions is on board. To facilitate the transition of the ceramics industry, Guangdong Province published the Implementation Guide on Transition Finance for the Ceramic Industry of Guangdong Province ("Implementation Guide") which includes a transition finance taxonomy for the ceramics industry.

In the Implementation Guide, the transition plan for the ceramics company includes: a commitment to ending carbon lock-in projects; establishing near-, mid-, and long-term transition targets and work, as well as specifying transition technology pathway for each phase. According to the transition finance taxonomy for the ceramics industry, there are four transition technology pathways, namely: upgrading energy structure; energy-saving process and equipment; clean production system, and adjusting product mix. Examples of transition technology pathways are:

- Upgrading energy structure: replacing fossil fuel with electricity, increasing the proportion of green electricity in the energy mix; using solar energy or zero-carbon fuels
- Energy-saving process and equipment: utilising energy-use monitoring and energy-saving technology and equipment
- Clean production system: using multi-pollutant processing technology, waste-to-resource technology
- Adjust product mix: shift to products that are energy- and water-efficient

After the roll-out of the Implementation Guide, some financial institutions in Guangdong Province have begun to issue loans to companies from the ceramics industry based on the taxonomy. For example, in September 2024, a batch of companies from the ceramics industry successfully accessed a credit line of RMB0.17 billion. The proceeds will be allocated to projects including the purchase of new energy, the establishment of production lines for products with environmental features, and upgrading production technologies and equipment.

Financial institutions are the primary agents charged with managing and co-ordinating transition finance. Under the guidance of national and local policies, several financial institutions have established internal transition finance frameworks or launched transition products to facilitate the use of transition finance in high-emitting and hard-to-abate sectors. Our study found that most examples come from the banking sub-sector, while a few cases come from the insurance and financial leasing sub-sectors. A number of examples from different sub-sectors are given below. Some relate specifically to the GBA while others from cities outside the GBA serve as references for good practices.

Banking sub-sector

Some leading banks have understood that they need their own transition finance taxonomy or plans to meet funding demands from industries. We noticed that several leading banks within mainland China and in Hong Kong have established internal transition finance taxonomies or plans, which include the pathway to transition or the eligible transition activities for the high-emitting and hard-to-abate sectors they focus on.

Case Study:

The 2024 Guangdong Green Finance Reform and Innovation Progress Conference was launched in November 2024. During the Conference, 12 banks and 12 companies from the building materials industry within Guangdong Province signed memorandums of understanding (MOUs) on future cooperation in the transition finance area.

Transition bonds are allocated to decarbonising assets or projects to assist "brown" sectors or companies shift to greener business activities. Our study found that most transition bonds were issued by the high-emitting and hard-to-abate sectors. It also found that while banking is not a primary contributor, some large banks within China have established transition bond frameworks and issued transition bonds to support the high-emitting or hard-to-abate sectors or projects within their capital pool.

Sustainability-linked loans(SLLs) are designed to incentivise borrowers to improve their sustainability practices by aligning loan terms with their sustainability performance, which is measured using one or more of the sustainability key performance indicators (KPIs). The SLL loan market has grown significantly, for example, according to public data, the volume of GSS+ loans (green, social and sustainability-linked loans) issued in Hong Kong was USD22.20 billion, of which, two-thirds were SLLs. Given the incentive mechanism of SLL, it can be an efficient tool for banks, as lenders, to support the transition of high-emitting and hard-to-abate sectors, such as oil and gas, and chemicals. Specifically, by setting sustainability performance targets against climate-related KPIs, such as GHG emissions and energy consumption and under the incentive mechanism, borrowers can be encouraged to improve their ESG management and performance in climate-related issues.

The special refinancing loan to support the clean and efficient use of coal is an innovative financial program launched by PBOC to support the transition of the coal industry. Launched in 2021 and effective till the end of 2023, the funds of the program were used to support safe, efficient, green and smart coal mining, clean and efficient coal processing, clean and efficient use of coal-fired power, clean industrial combustion and heating, clean residential heating and comprehensive utilisation of coal resources.[32] Financial institutions in Guangdong Province actively leveraged the facility to support the transition of the coal industry. According to available public data, as of the end of 2022, financial institutions within Guangdong Province issued RMB2.8 billion in special refinancing loans to support the clean and efficient use of coal.[33]

Financial leasing sub-sector

In the context of dual carbon goals, financial leasing companies have increased investment in green leasing, by providing entities with tangible green and low-carbon assets to support their green development. Our study found that the concept of transition finance is still ambiguous in the financial leasing sub-sector. However, it is worth noting that some financial leasing companies are increasingly attentive to the transition of aviation and shipping industries, two of the hard-to-abate sectors. Some financial leasing companies have promoted the transition of their shipping fleet and/or aircraft fleet by upgrading existing ships or aircraft and deploying newly built energy-saving ships or aircraft.

Case Study:

A leading financial leasing company in Shenzhen converted its existing ships into energy-saving ones and designed newly built ships in such a way as to reduce emissions. For example, all ships have been equipped with desulphurisation towers or use low-sulphur fuel. At the same time, new ships are equipped with energy-saving devices, which reduce fuel consumption by approximately 5% compared with ships of the same type that are not equipped with such devices. The company also plans to establish an energy-saving aircraft fleet, with the stated aim of having a 60% energy-saving fleet by 2025.[34]

Insurance sub-sector

Hong Kong's insurance companies usually assume the roles of asset owner and asset manager. Our study observed that certain leading insurance companies in Hong Kong have established climate transition plans setting out concrete actions to promote the transition from brown to green in their operations and their investment portfolio (which includes finance companies). The Hong Kong Federation of Issuers (HKFI) developed its Climate Charter to address climate change. This Climate Charter encourages Hong Kong's industry to promote sustainable investment, specifically mentioning portfolio carbon intensity reduction and transition financing.

The above notwithstanding, our study found that, in the main, insurance companies within the GBA have not incorporated transition finance into their products. The case below tells of a Shanghai insurance company that has done just that, i.e., incorporated "transition" into its insurance products.

Case Study:

A Shanghai insurance company co-operated with a Shanghai bank to launch an innovative "transition loan + insurance" product, the first of its kind in China, in April 2024. The bank issued an SLL for a company from the chemical industry, linking the company's sustainability performance targets with the interest rate of the loan. Based on this, the insurance company provided insurance services for the company to help address the risk of failure to achieve sustainability performance targets linked to its SLL.

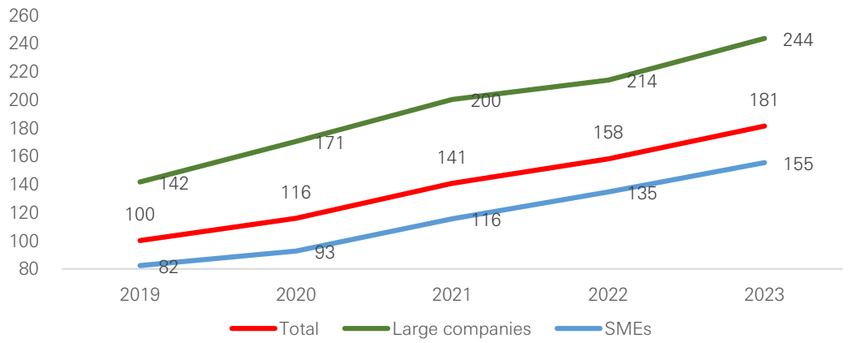
GBA ESG Industry Sub-indices by Company Size

GBA ESG Industry Sub-indices by Company Size

The GBA ESG Sub-indices by company size track the annual ESG performance of companies within the GBA. Specifically, this report looks at the ESG performance of a sample of 470 GBA-based companies in 2023 by analysing their performance[xxiv] with regard to various ESG indicators under five pillars, namely environmental, social, governance, green and sustainable finance, and external assurance.

Overall Performance of the GBA ESG Sub-indices by Company Size

Figure 21. GBA ESG Sub-indices – large companies vs. SMEs



Note: The red line represents the average ESG performance of the 470 companies in the sample, the numbers being the index values for that year. The base value of the red line was set at 100.00 for Q4 2019 (base period). Our study analysed the ESG performance of 470 sample GBA companies, including 140 large companies and 330 SMEs.
Source: Public disclosures of listed companies, other public sources, CECEPEC

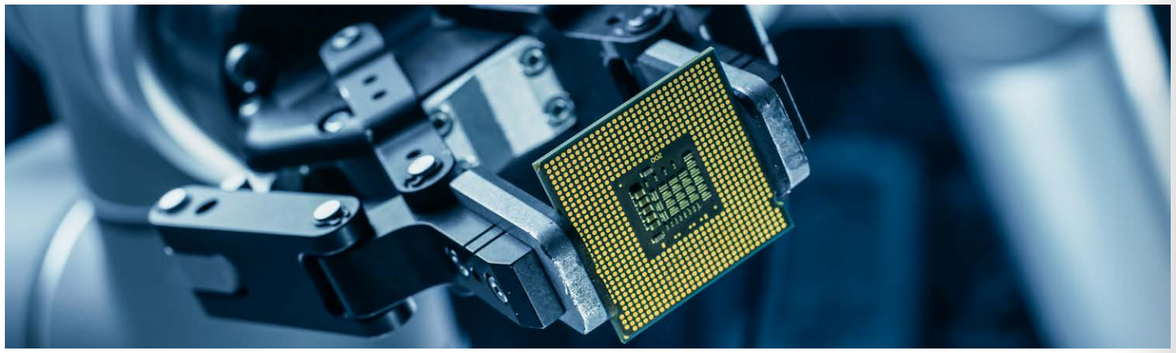


Figure 22. ESG performance of large companies and SMEs in the five pillars

	Year	Overall ESG performance	Environmental	Social	Governance	Green and Sustainable Finance	Exernal Assurance
Large Companies	2019	41.44	37.94	57.65	30.94	0.00	22.14
	2020	49.88	46.85	66.28	40.14	3.57	25.00
	2021	58.56	56.73	73.65	49.70	0.00	29.29
	2022	62.61	60.66	75.44	58.39	7.14	27.86
	2023	**71.26**	**68.53**	**82.52**	**69.66**	3.57	**41.43**
SMEs	2019	24.08	29.21	25.56	19.68	0.00	1.21
	2020	27.10	31.78	29.03	23.54	0.00	1.52
	2021	33.80	36.24	35.95	35.19	0.00	1.21
	2022	39.38	41.17	42.06	42.29	0.30	2.12
	2023	**53.08**	**48.08**	**47.81**	**48.84**	0.30	**3.03**
Gaps between large companies and SMEs	2019	17.37	8.73	32.09	11.26	0.00	20.93
	2020	22.78	15.06	37.24	16.59	3.57	23.48
	2021	24.76	20.49	37.70	14.50	0.00	28.07
	2022	23.23	19.49	33.38	16.10	6.84	25.74
	2023	25.81	**20.47**	**34.71**	**20.82**	3.27	**38.40**

Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, other public sources, CECEPEC

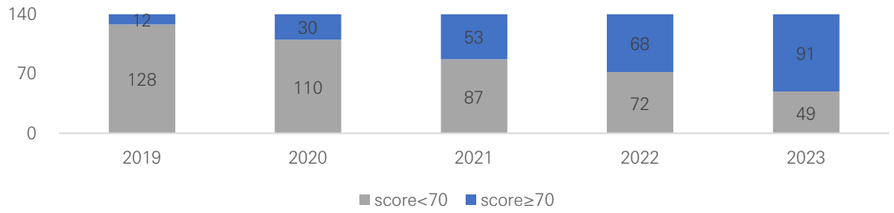
Figure 22 shows the scores[xxv] for large companies and SMEs, specifically the overall performance and the individual values under each of the five pillars. As per the table, **large companies and SMEs achieved higher scores in overall ESG performance and in most pillars in 2023 than in the preceding four years**. Large companies experienced a decline in the pillar of green and sustainable finance. According to our data, five sample large companies engaged in green and sustainable bond financing in 2023 while in 2022, ten sample large companies did so. The changes are in line with the performance of the GSSS bond market. According to our study, companies from different sectors were less active in the GBA's GSSS bond market, as evidenced by a 45% year-on-year decrease in the issuance volume of GSSS bonds in 2023.

The following reports analyse the ESG performance of large companies and SMEs separately and also compare the performance of listed companies from different stock exchanges. Our study observed **a common situation for both groups – companies listed in Hong Kong performed better than those solely listed in mainland China**. The gaps can be explained by the fact that Hong Kong-listed companies have been reporting their ESG performance for much longer than those on the mainland. Additionally, our study observed that for those companies listed on the same stock exchanges, large companies continued to have a better performance than SMEs.

xxiv. We evaluated the companies' performance in most ESG indicators based on their 2023 ESG, corporate social responsibility (CSR), sustainability or other non-financial reports. We assessed companies' performance with regard to three indicators, namely board gender diversity, board independence and issuance of GSSS bonds based on their 2023 annual reports and other public sources.
xxv. When assessing the ESG performance, we scored each ESG indicator under five pillars for all of the companies within the sample.

ESG Performance of Large Companies

Figure 23. Score distribution of large companies in overall ESG performance



Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance. The value of the Y-axis represents the number of companies achieving the corresponding scores.
Source: Public disclosures of listed companies, other public sources, CECEPEC

As per Figure 23, **the number of large companies achieving high scores (higher than 70 points) increased significantly in 2023**, from 68 to 91, accounting for 65% of the total number of the large companies in the sample.

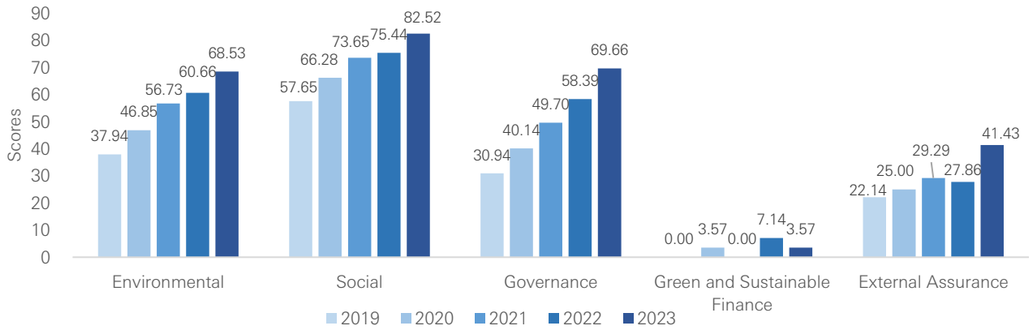
Figure 24. Score distribution of large companies in overall ESG performance: by stock market

Scores	Companies listed only on a single exchange		Companies listed on multiple exchange
	SEHK	SZSE/SSE/BSE	SZSE/SSE/BSE+SEHK
Scores≥70	85%	38%	69%
Scores<70	15%	62%	31%

Source: Public disclosures of listed companies, other public sources, CECEPEC

Our study also looked at the score distribution of larger companies by stock market. Figure 24 shows that **large companies listed in Hong Kong performed better than those listed in mainland China**. Specifically, for large companies listed on a single exchange, 85% of those listed in Hong Kong achieved high scores (scores≥70), while the corresponding figure for those listed in mainland China was only 38%. For those companies listed in both Hong Kong and mainland China, the proportion of companies achieving high scores was 69%, close to the sample average of 65%.

Figure 25. Scores of large companies in five pillars



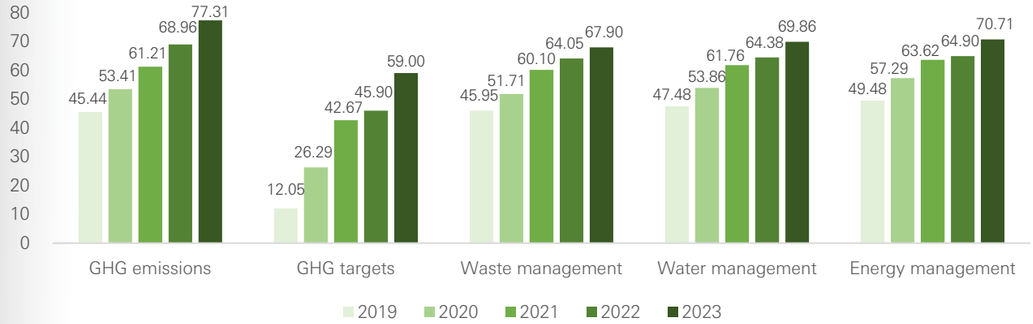
Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, other public sources, CECEPEC

As per Figure 25, **large companies continuously improved in the environmental, social and governance pillars in 2023**. The sections below provide detailed analyses of the performance of large companies under the environmental, social, and governance pillars. With regard to green and sustainable finance, five of the large companies sampled issued GSSS bonds in 2023, fewer than the corresponding number for 2022.

Our study observed that the score for the external assurance pillar improved significantly in 2023. According to our data, of the 140 large companies sampled, 41% obtained ESG assurance in 2023, while for the four preceding years, 2019 – 2023, the corresponding proportion was below 30%.

Environmental Performance of Large Companies

Figure 26. Scores of large companies in environmental indicators

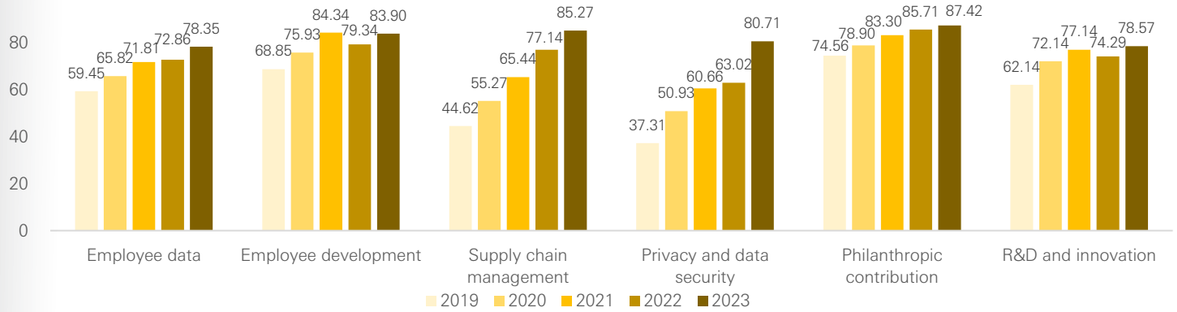


Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, CECEPEC

Since we began publishing this report, large companies have improved substantially in all five pillars of environmental performance., as per Figure 26. In recent years, **the scores for GHG emissions and GHG target-setting have increased more than the equivalent scores for the other three indicators**. Our data shows that in 2019, only 14% of large companies reported their Scope 3 emissions, increasing to over 40% in 2023. Additionally, the targets set by most large companies are either SBTs approved by SBTi or milestones established in line with China's dual carbon goals.

Social Performance of Large Companies

Figure 27. Scores of large companies in social indicators

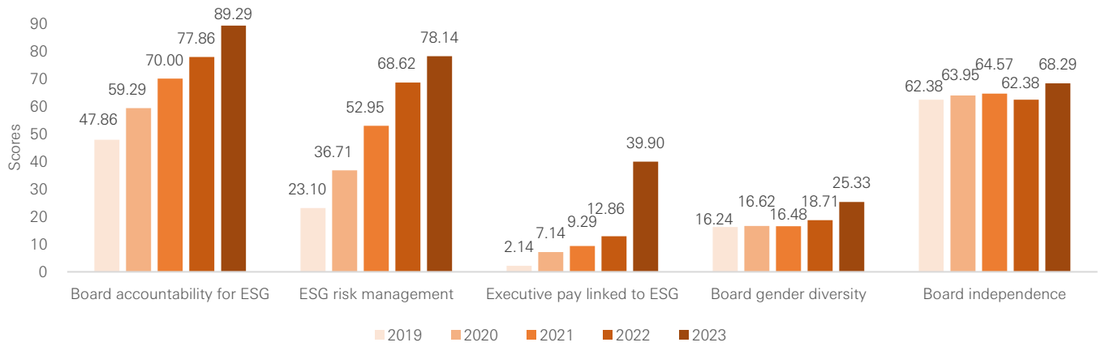


Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, CECEPEC

In 2023, supply chain management and privacy and data security improved significantly. As shown in Figure 27, large companies scored lower in supply chain management and privacy and data security than in other indicators from 2019 to 2022, albeit improving year on year. The improvements indicate that large companies are now paying increasing attention to and investing more resources in the issues of supply chain management and privacy and data security.

Governance Performance of Large Companies

Figure 28. Scores of large companies in governance indicators

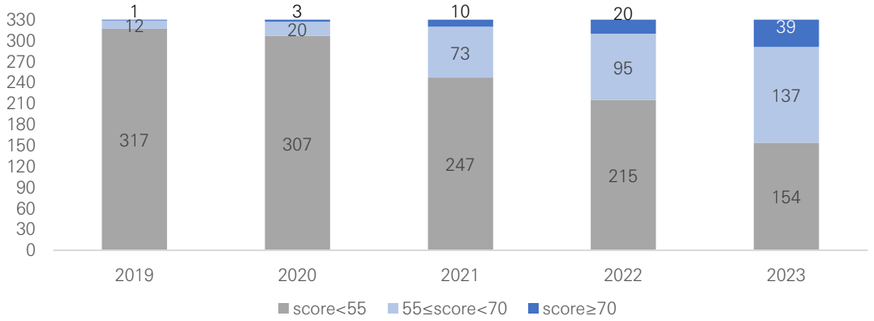


Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, other public sources, CECEPEC

The performance of large companies in all five governance indicators has improved since 2019 with the highest scores being achieved in 2023. Board accountability for ESG and ESG risk management were the two best-performing indicators. In 2023, **nearly 90% of large companies had ESG governance structures in place with board-level oversight and they also conducted internal identification and assessment of ESG risks**. At the same time, **about 40% of companies linked ESG performance to executive pay**. In 2019, only 2% of companies did so.

ESG Performance of SMEs

Figure 29. Scores distribution of SMEs in overall ESG performance



Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, other public sources, CECEPEC

According to our data, **over the past several years, SMEs have improved significantly in ESG performance, as evidenced by an increasing number of companies achieving higher scores**. In 2019, only 4% of sample SMEs achieved scores higher than 55 points. However, in 2023 the corresponding figure was over 50%.

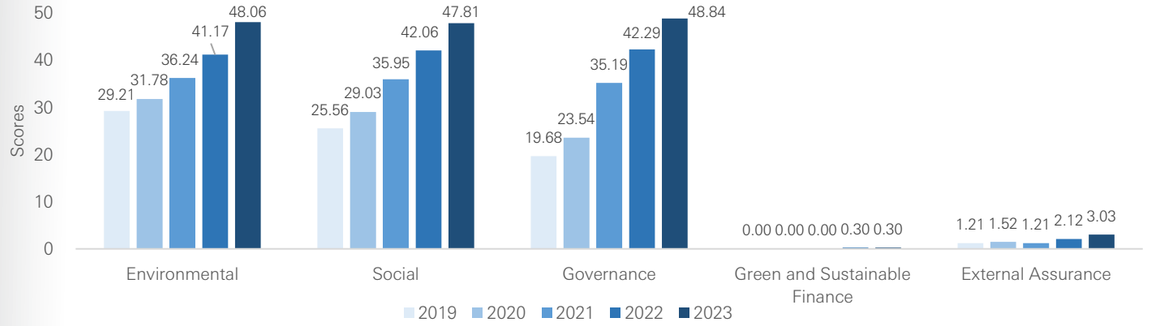
Figure 30. Score distribution of SMEs in overall ESG performance: by stock market

Scores	Companies listed only on a single exchange		Companies listed on multiple exchange
	SEHK	SZSE/SSE/BSE	SZSE/SSE/BSE+SEHK
Scores≥70	16%	3%	0%
Scores<70	84%	97%	100%

Source: Public disclosures of listed companies, other public sources, CECEPEC

As with large companies, **SMEs listed in Hong Kong performed better than those listed in mainland China**. Figure 30 shows that in 2023 16% of SMEs solely listed in Hong Kong achieved high scores (over 70 points), higher than the corresponding figure for those solely listed in mainland China.

Figure 31. Scores of SMEs in five pillars



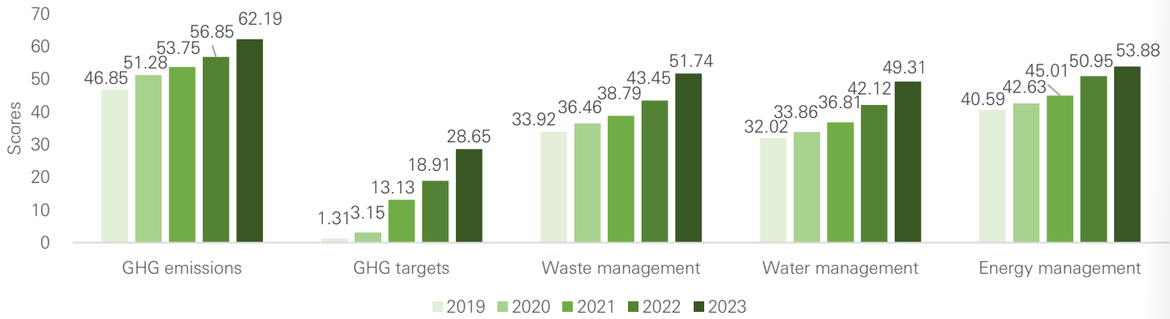
Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, other public sources, CECEPEC

As can be seen in Figure 30, **since 2021, SMEs have had a balanced performance in the three main pillars, namely environmental, social and governance. Furthermore, all three indicators reached highs in 2023**. The sections below analyse the performance of SMEs under the environmental, social and governance pillars in greater detail.

Our study found that only one of the SMEs in the sample issued green bonds to finance its green projects in both 2023 and 2022. Furthermore, over the period in question only a handful of SMEs obtained external assurance for their annual ESG disclosure.

Environmental Performance of SMEs

Figure32. Scores of SMEs in environmental indicators

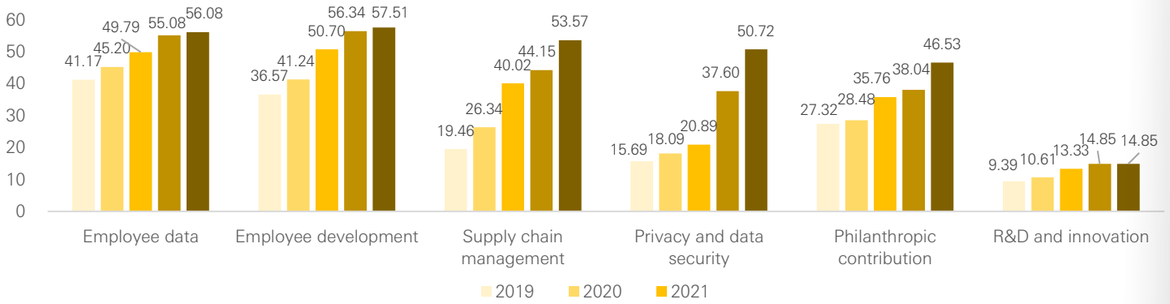


Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, CECEPEC

Within the context of the five environmental indicators, and over the period 2019 to 2023, **SMEs consistently achieved the highest score in GHG emissions and showed the greatest improvement in GHG targets**. In 2023, 70% of SMEs disclosed their GHG emission data and half of them disclosed their Scope 3 data. Furthermore, **in 2023, two companies became the first SMEs in the history of the survey to set SBTs**. Prior to 2023 no SME had ever done so.

Social Performance of SMEs

Figure33. Scores of SMEs in social indicators

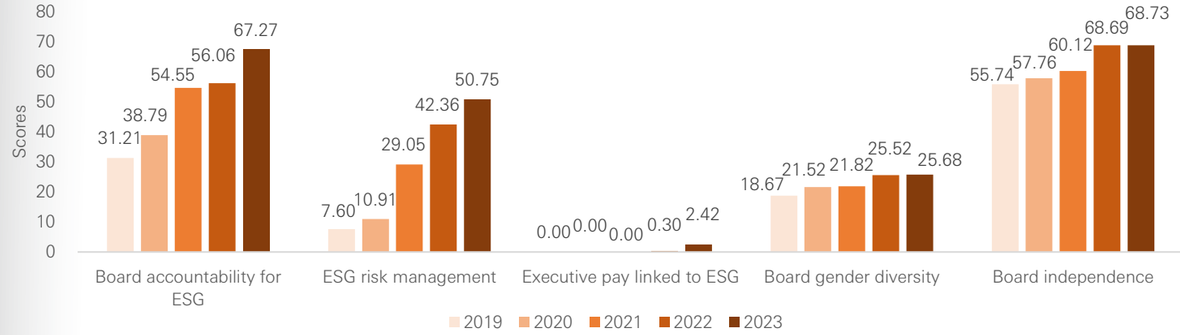


Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, CECEPEC

Our study found that **SMEs have increasingly invested in supply chain management and, privacy and data security over the period in question**. As per Figure 33, SMEs performed poorly in supply chain management and privacy and data security in 2019. However, since then the scores for these two indicators have improved continuously and significantly so much so that in 2023 their scores were higher than the average value for all social indicators.

Governance Performance of SMEs

Figure34. Scores of SMEs in governance indicators



Note: Scores range from 0 to 100. The closer the score is to 100, the better the performance.
Source: Public disclosures of listed companies, other public sources, CECEPEC

For SMEs there has been a steady improvement in ESG management systems since 2019. Specifically, an increasing number of companies have set up ESG governance structures with board-level oversight and conducted internal identification and assessment of ESG risks. 2022 saw the first SMEs in the history of the survey link executive pay to the company's ESG performance. In 2023, eight companies did so.

Appendices

Glossary

Term/Acronym/Abbreviation	Interpretation
AI	Artificial intelligence
CBI	Climate Bonds Initiatives
CCUS	Carbon capture and utilisation and storage
GBA	Guangdong-Hong Kong-Macao Greater Bay Area
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GSSS bonds	Green, social, sustainability and sustainability-linked bonds
HKFI	Hong Kong Federation of Issuers
HKICPA	Hong Kong Institute of Certified Public Accountants
HKMA	Hong Kong Monetary Authority
ICMA	International Capital Market Association
ISO	International Organisation for Standardisation
ISSB	International Sustainability Standards Board
KPIs	key performance indicators
MOU	memorandum of understanding
NEVs	new energy vehicles
NFRA	National Financial Regulatory Administration
OECD	Organisation for Economic Co-operation and Development
PBOC	People's Bank of China
PRD	Pearl River Delta
PRI	Principles for Responsible Investment
R&D	Research and development
SAF	Sustainable aviation fuel
SASAC	State-owned Assets Supervision and Administration Commission of the State Council
SDGs	Sustainable Development Goals
SME	Small and medium-sized enterprises
SBT	Science-based targets
SBTi	Science-Based Targets initiative
SEHK	Stock Exchange of Hong Kong
SLL	Sustainability-linked loan
SOEs	State-owned enterprises
SZSE	Shenzhen Stock Exchange
TCFD	Task Force on Climate-related Financial Disclosures
The Index	HSBC Greater Bay Area ESG Index
TNFD	Taskforce on Nature-related Financial Disclosures

Note: In alphabetical order

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Table of Indicators

Figure 35. Indicators for regional/cities and industry level

First-level Indicator	Second-level Indicator
Environment	Corporate CDP disclosure performance
	Corporate science-based climate commitments
	Air quality
	Energy use efficiency
	Water use efficiency
	Electricity use efficiency
	Public sector’s contribution to environmental protection
	Urban greenness
Economic and Social Development	Economic development
	Economic contribution of tertiary industry
	Employment situation
	Public sector’s contribution to education
	Innovation and technological advancement
Corporate Governance	Activeness of market players
	Corporate ESG disclosure performance
Green and Sustainable Finance	Activeness of market players
	Investor commitment to sustainable investing
	Volume of sustainable debt instruments
	Number of ESG mutual funds
Policy	Policies related to sustainable development in the GBA

Source: CECEPEC

Figure 36. Indicators for company level

First-level Indicator	Second-level Indicator
Environment	Greenhouse gas (GHG) emissions
	GHG targets
	Waste management
	Water management
	Energy management
Social	Employee data
	Employee development
	Supply chain management
	Privacy and data security
	Philanthropic contribution
	R&D and innovation
Governance	Board accountability for ESG
	ESG risk management
	Executive pay linked to ESG
	Board gender diversity
	Board independence
Green and Sustainable Finance	Issuance of GSSS Bonds
External Assurance	ESG report external assurance

Source: CECEPEC

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