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政策研究院
PUBLIC POLICY INSTITUTE

Strategic Development of Green Bond Market in Hong Kong

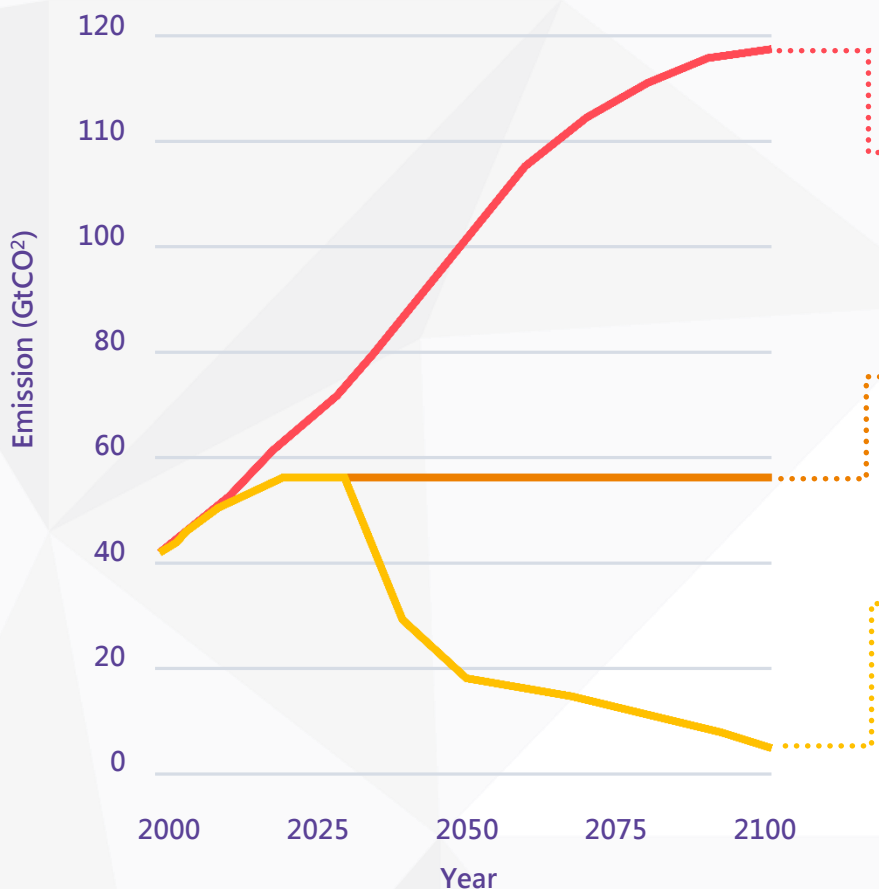
Overview and Considerations for Future Actions of the Government

19th October 2017

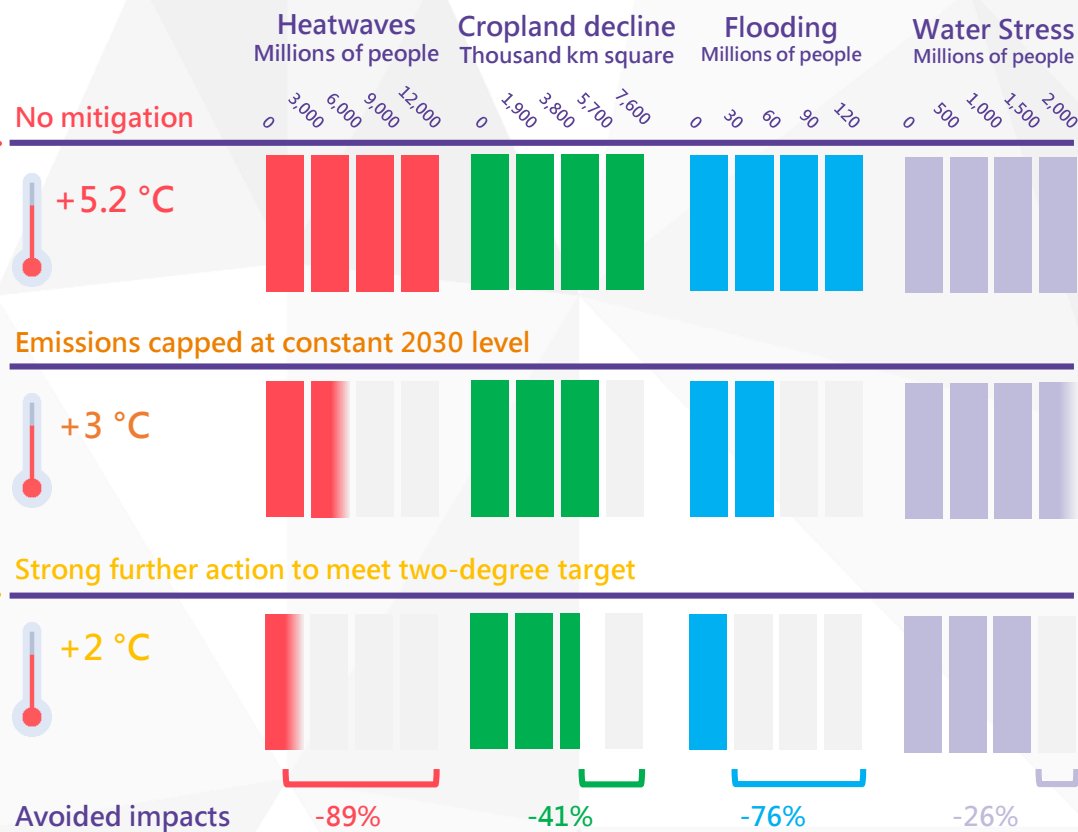


Impact of climate change

Selected greenhouse gas emission pathways

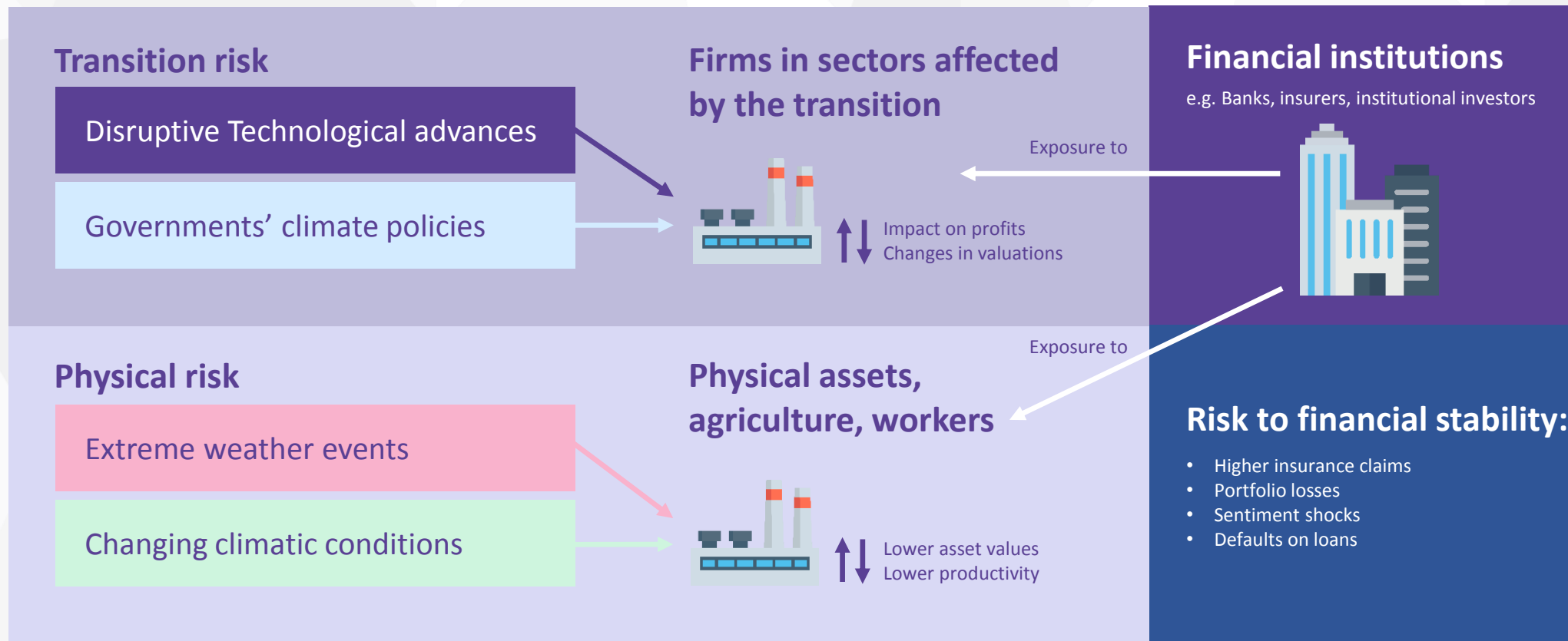


Selected global climate impacts in 2100



Source: Bank of England (2017)

Climate-related financial risks





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The stance of Bank of England on climate change

Insured losses (from natural catastrophes) have increased (globally) from an average of around US\$10 billion per annum in the 1980s to an average of around US\$45 billion per annum so far this decade.

Source: Quarterly Bulletin, Bank of England (2017)



Bank of England



Governor of Bank of England,
Mark Carney

This could ultimately lead to a ‘climate Minsky Moment’ – a rapid system – wide adjustment that threatens financial stability.

Source: Quarterly Bulletin, Bank of England (2017)



A new model of economic development

Ecological conservation is vital not only to sustained, healthy economic development, but also to political and social progress, and must therefore be given a position of prominence and incorporated into every aspect and the whole process of economic, political, cultural, and social development.

The State Council of the P.R.C." Integrated Reform Plan for Promoting Ecological Progress"

Economic development should move away from the typical industrial economic growth strategies which advocate **"development first, conservation later"**.

There should be the right balance between development and conservation to **achieve "green growth" and form a new pattern of modernization in harmony with nature**



The megatrend of green finance

The Paris Agreement

Limiting global temperature rise well below 2 degrees Celsius above pre-industrial levels

Investment needed for 2015-2030:
around USD 90 trillion

195 members of the United Nations Framework Convention on Climate Change have signed the Paris Agreement

Recent development of green finance in China



- Notes :
1. Published by the State Council.
 2. The People's Bank of China (PBOC) published a notice of which the Catalogue by the Green Finance Committee of China Society of Finance and Banking is a supplement.
 3. Published by the National Development and Reform Commission (NDRC).
 4. Co-published by the PBOC, MOF, NDRC, MEP, CBRC, CSRC and CIRC.

A day late and a dollar short

Shenzhen has long started building green finance infrastructure

The first emission trading system in China was established in China in 2010

Shenzhen Stock Exchange co-launched a green bond index with Luxembourg Stock Exchange

Establishment of Shenzhen Green Finance Committee in 2017

China has established five pilot zones in June 2017

Guangzhou in Guangdong

Huzhou and Quzhou in Zhejiang

Gui'an New Area in Guizhou

Hami, Changji Hui Autonomous Prefecture, Karamay

Ganjiang New District in Jiangxi

Shanghai also attaches great importance to green finance

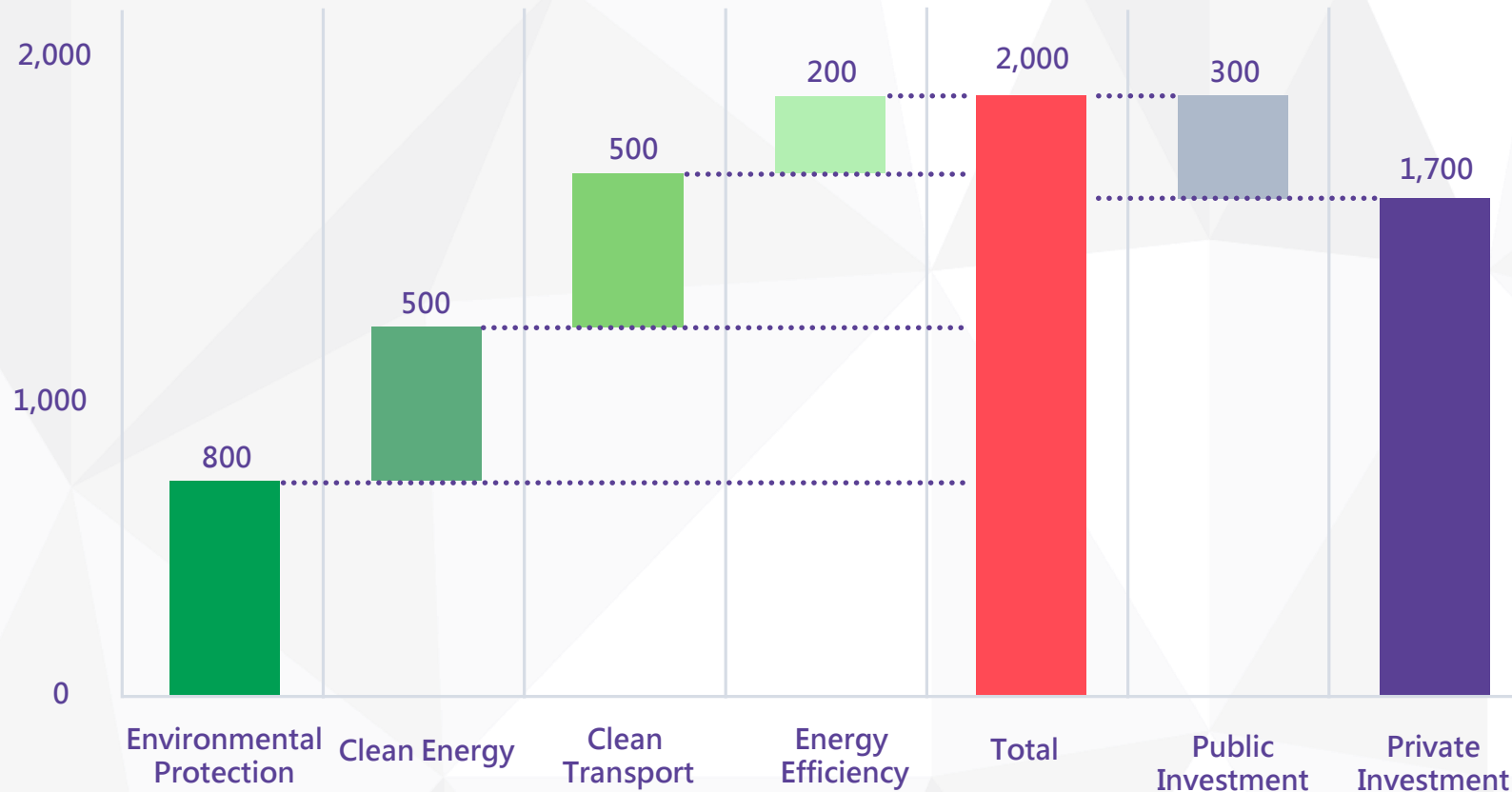
Shanghai Environment and Energy Exchange was established in 2011

Shanghai Stock Exchange co-launched a green bond index with Luxembourg Stock Exchange

Establishment of Lujiazui Green Finance Development Centre in 2017

China also faces the lack of green financing

Achieving national environmental goals during the 13th Five-Year Plan period from 2016-2020 will require an annual investment of at least RMB 2 trillion

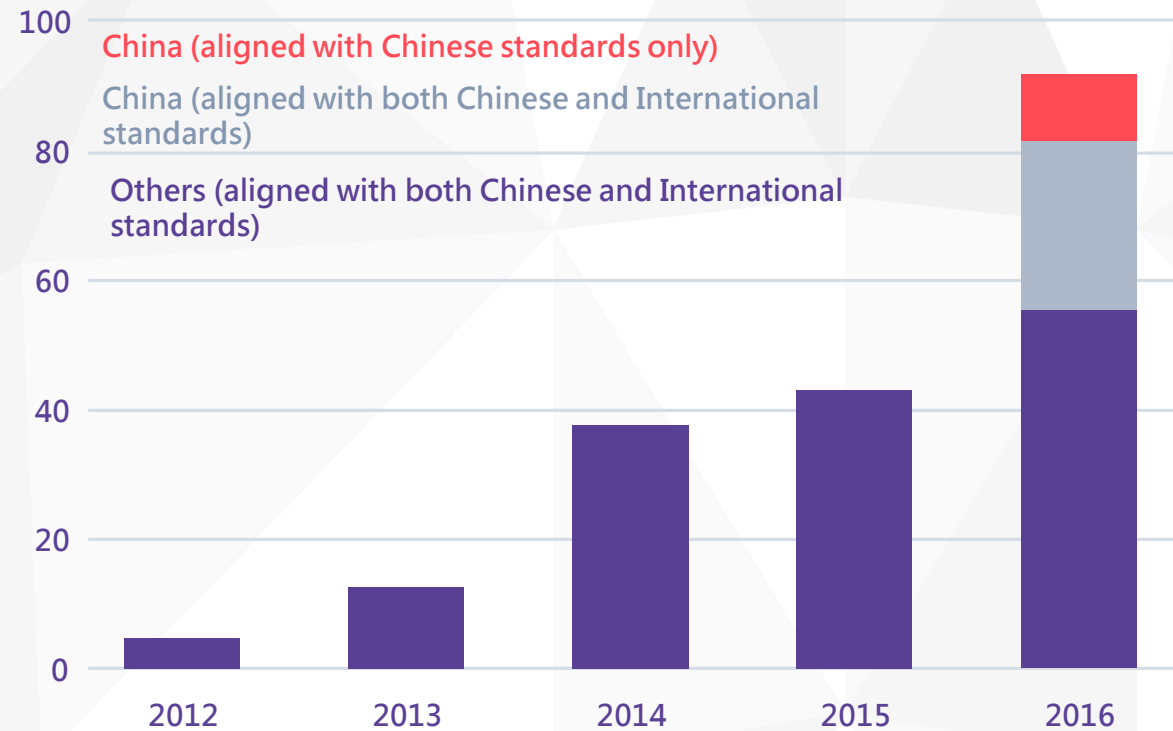


Private investment needed:
RMB 1700 billion



Rapid development in the global market

Issuance of green bonds in 2016 doubled the amount in 2015



Source: Climate Bonds Initiative (2017)



Green bond policies and initiatives across the globe



The Monetary Authority of Singapore has announced in Mar 2017 the establishment of the Green Bond Grant Scheme in which will cover external review costs. Singapore also actively participates in the G20 Green Finance Study Group, as well as promoting the GreenInvest platform.



The first Chinese green covered bond issued by Bank of China and the first RMB-denominated bond issued by IMF were both listed on London Stock Exchange. Also, the UK and China co-published the “UK-China Collaboration on Growing a Global Green Bond Market” report.



Luxembourg has the largest green bond exchange in the world. The Luxembourg Stock Exchange has also collaborated with the Shenzhen Stock Exchange and the Shanghai Stock Exchange to launch Chinese green bond indices.



The United Nations Environment Programme – Finance Initiative has over 200 members from the financial industry who support sustainable development. The Sustainable Stock Exchanges initiative is a learning platform for global stock exchanges to share their experiences in sustainable development.



Poland issued the first green sovereign in the world in Dec 2016.



Japan has published its own guidelines on green bonds. The Tokyo municipal government also issued the “Tokyo Environment Supporter Bond”.



France issued a green sovereign bond with the maturity of 22 years in Jan 2017. It also introduced mandatory climate risk reporting for different institutions.



Why is green finance significant to Hong Kong?

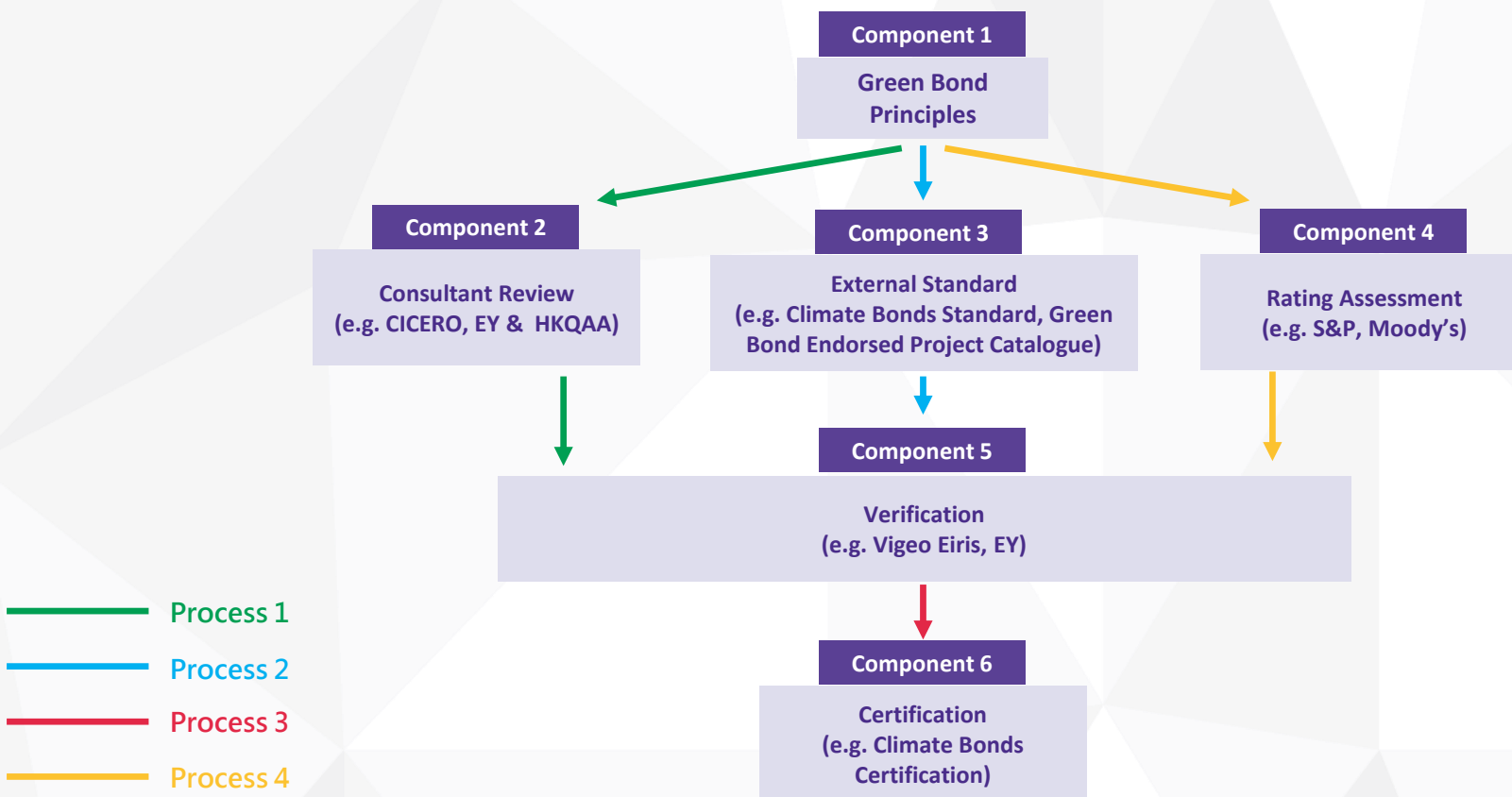
The Chinese Government aims at building a green silk road and the Belt and Road initiative will bring opportunities in green finance. Hong Kong is equipped to explore the untapped markets.

Hong Kong has experience in verification of environmental projects, which will facilitate the growth of green accreditation services.

The Government can issue green bonds which will help develop the local bond market at the same time.

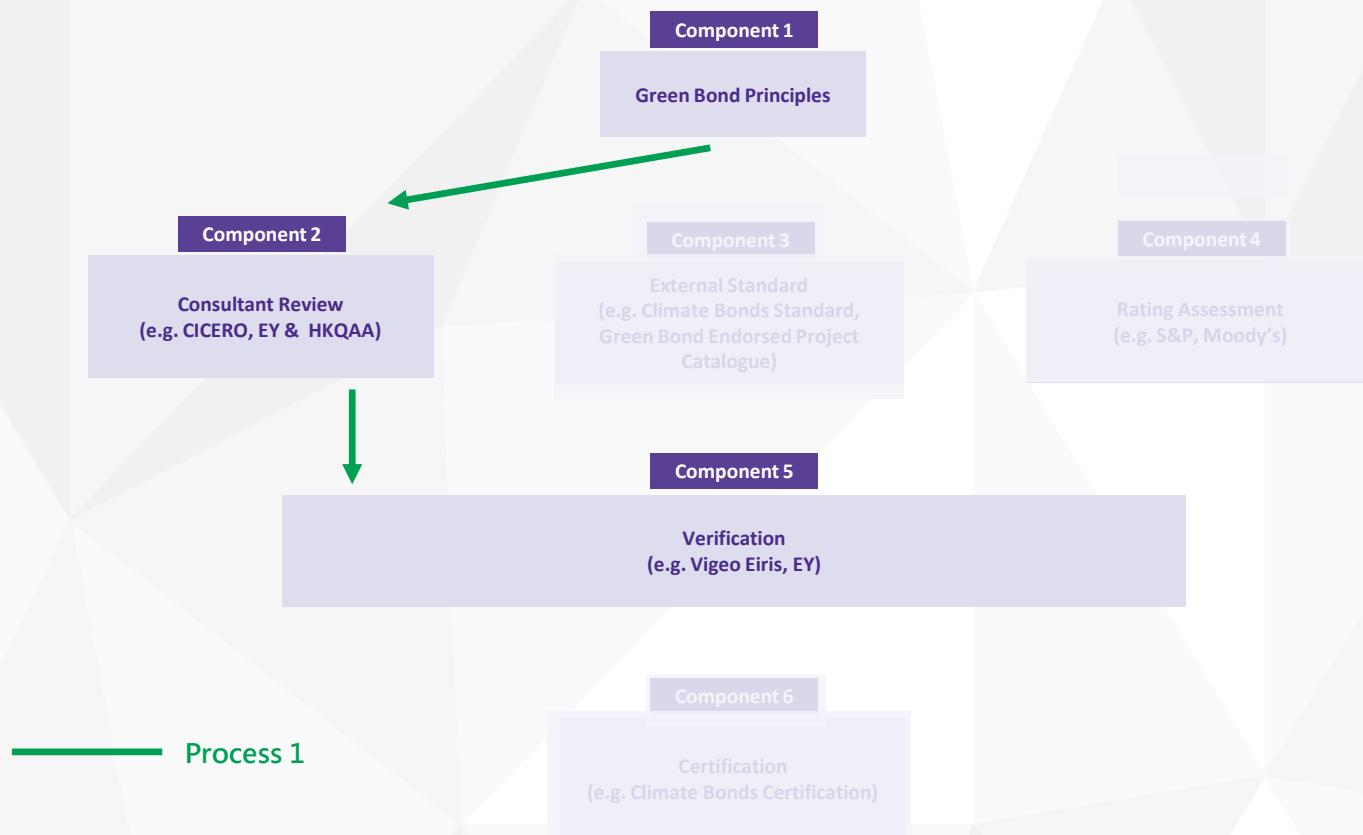
Global green bond standards

A green bond differs from a traditional bond with its external review which comprises four processes



Global green bond standards

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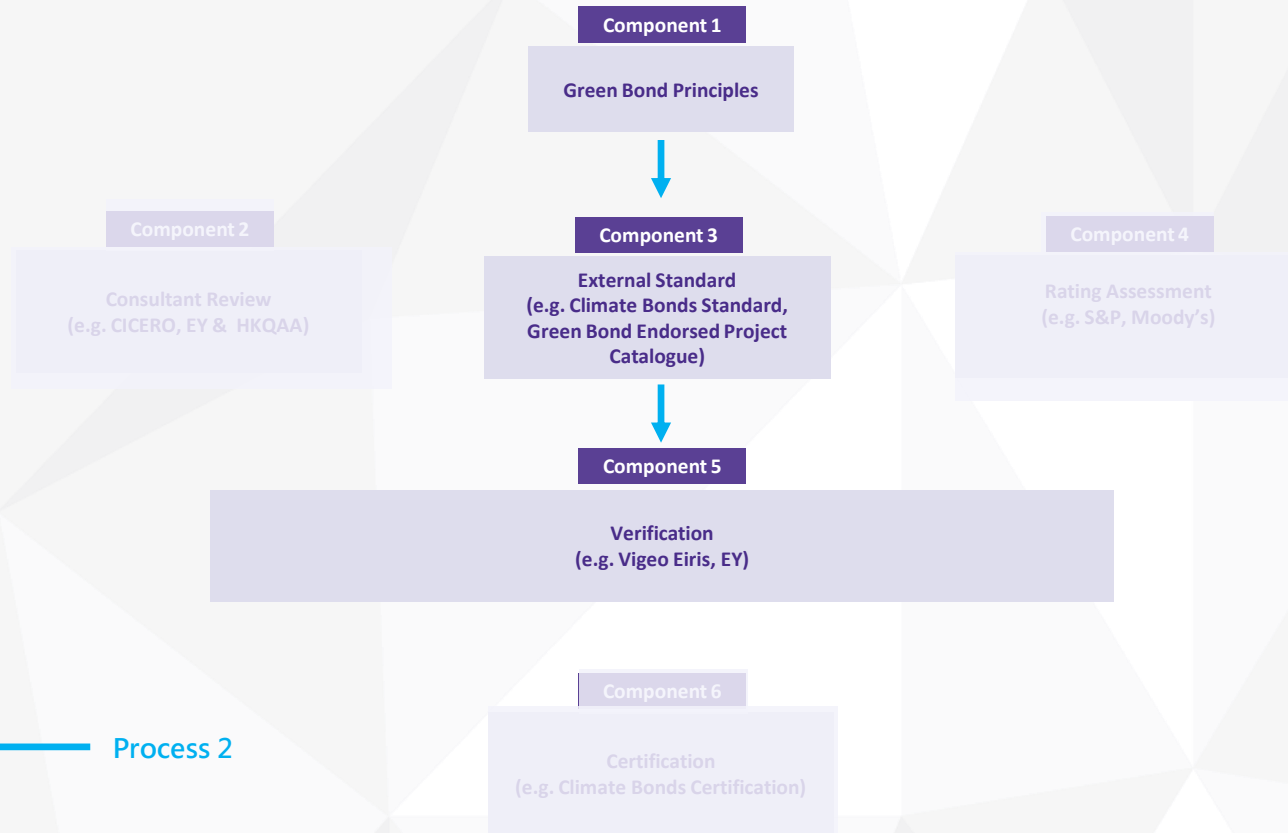
Case study

Issuer	Iberdrola
Date	Apr 2016
Size	USD 1 billion
Duration	10 years
Coupon	1.125%
Over-subscription	4x
Consultant	Vigeo Eiris
Verifier	Vigeo Eiris
Principles	Green Bond Principles
Use of proceeds	Develop wind farms in UK, Spain and Germany



Global green bond standards

A green bond differs from a traditional bond with its external review which comprises four processes



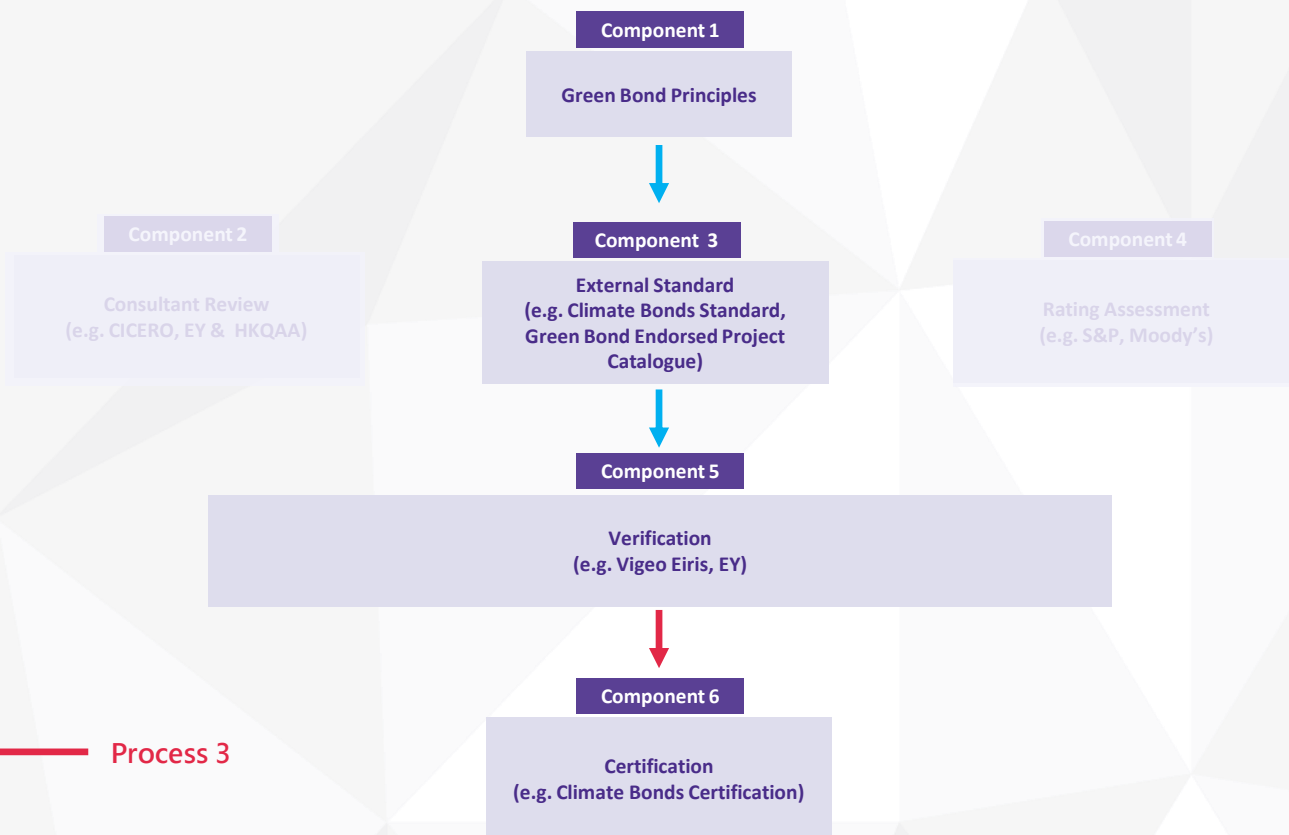
Process 2

Case study

Issuer	Shanghai Pudong Development Bank
Date	Jan 2016
Size	RMB 20 billion
Duration	3 years
Coupon	2.95%
Over-subscription	2x
Verifier	EY
Standard	Green Bond Endorsed Project Catalogue
Use of proceeds	Provide financing for 6 categories of projects (e.g. energy, transport, energy efficiency)

Global green bond standards

A green bond differs from a traditional bond with its external review which comprises four processes

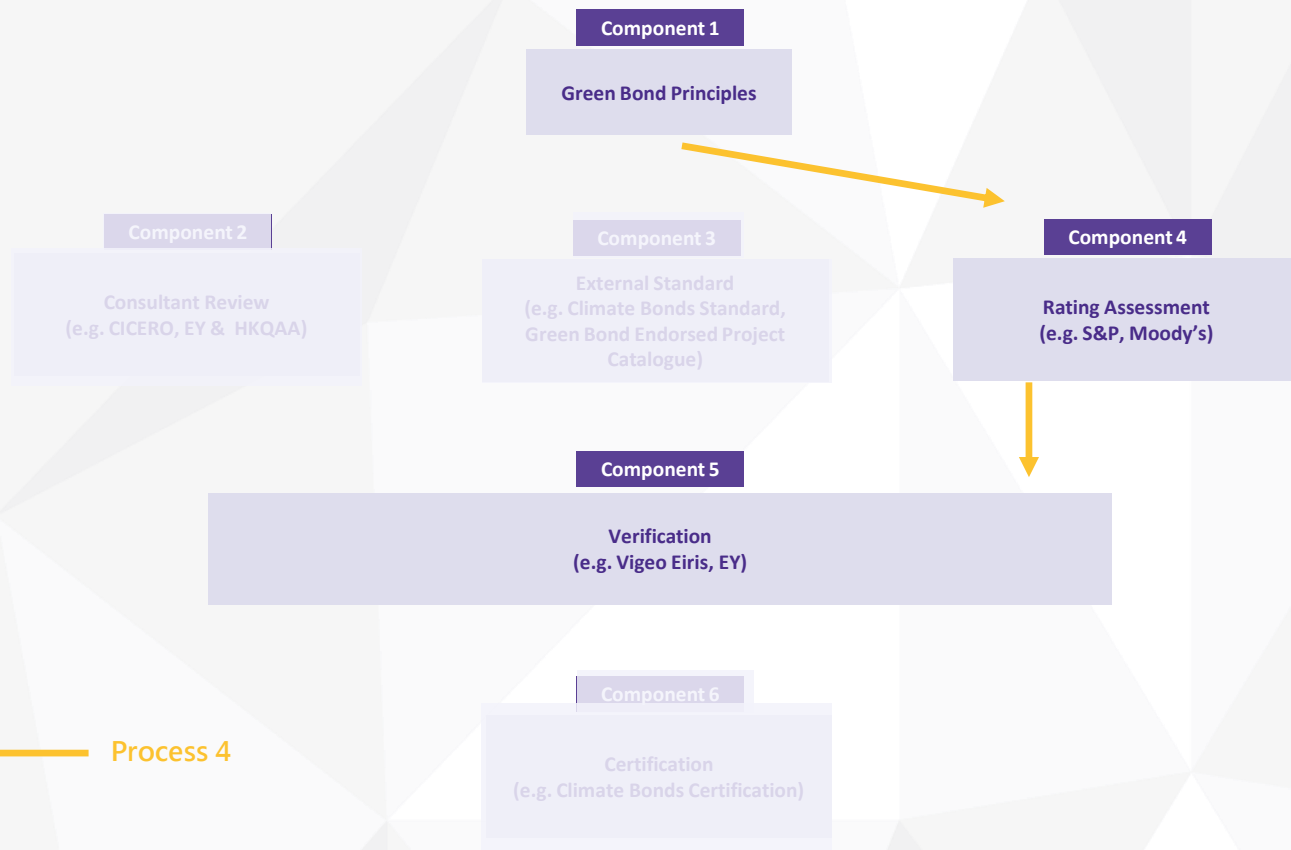


Case study

Issuer	Société nationale des chemins de fer français
Date	Nov 2016
Size	EUR 900 million
Duration	15 years
Coupon	1.104%
Over-subscription	5x
Verifier	Oekom
Standard	Climate Bonds Standard
Use of proceeds	Develop railway system in France

Global green bond standards

A green bond differs from a traditional bond with its external review which comprises four processes



Case study

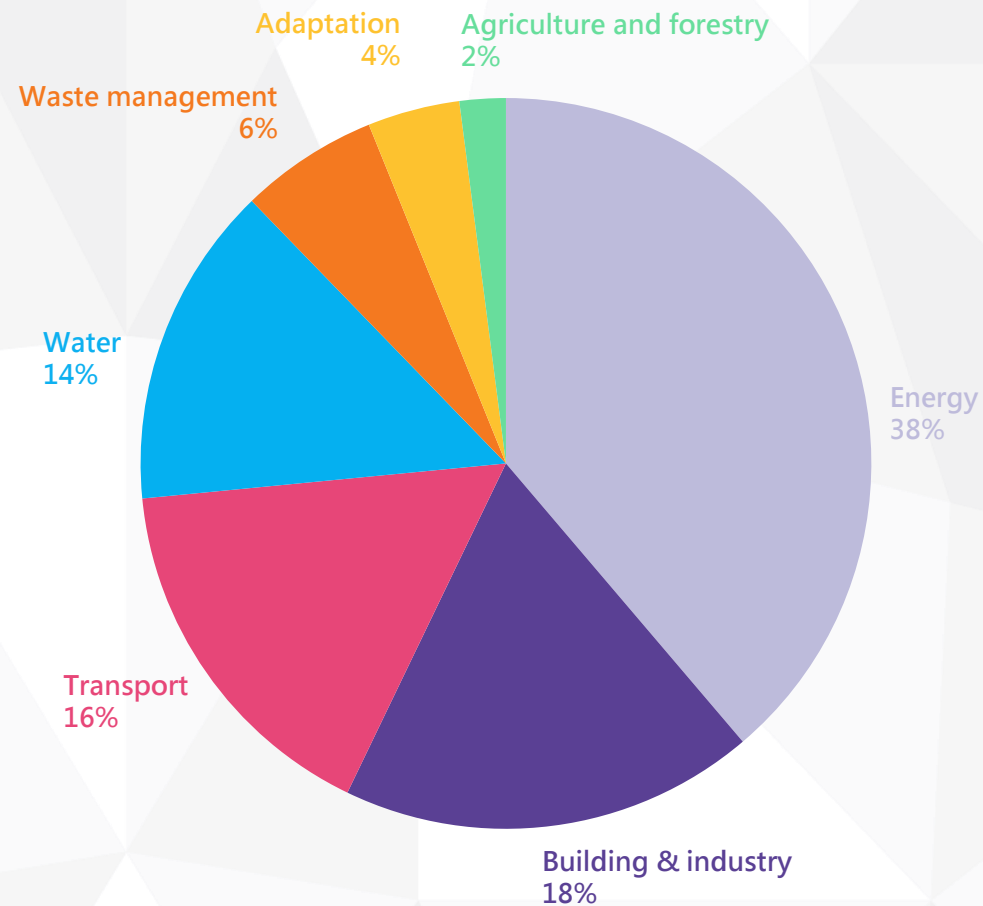
Issuer	TenneT Holdings
Date	Sept 2016
Size	EUR 1 billion
Duratoon	8/12 years
Coupon	0.75/1.375%
Over-subscription	2x
Verifier	Oekom
Rating agencies	S&P and Moody's
Principles	Green Bond Principles
Use of proceeds	Develop wind farms in Holland and Germany



Green projects help alleviate environmental problems

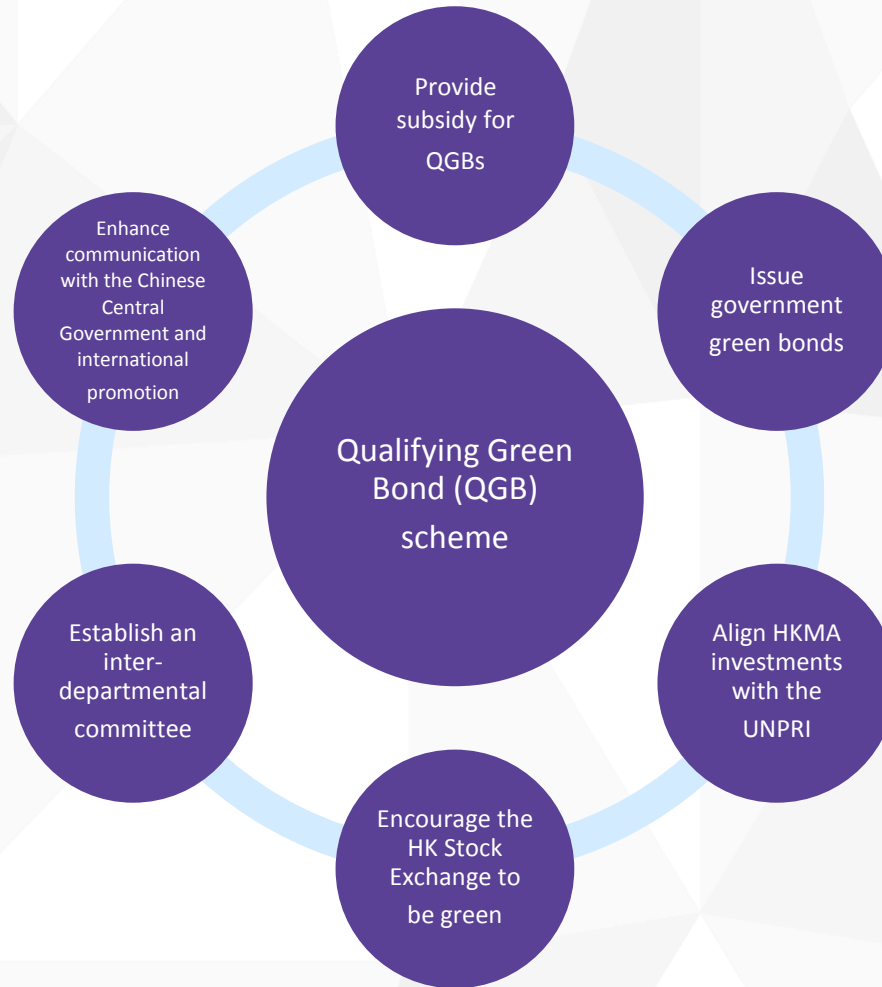
Global warming	Modification to the drainage and sewerage system
Air pollution	Renewable energy Low-carbon transport Green buildings
Water pollution	Seawater Desalination
Land and waste management	Recycling Bioenergy
Deforestation	Forestry
Destruction of ecosystem	Ecological conservation

Green bond issues by category of green projects, 2016





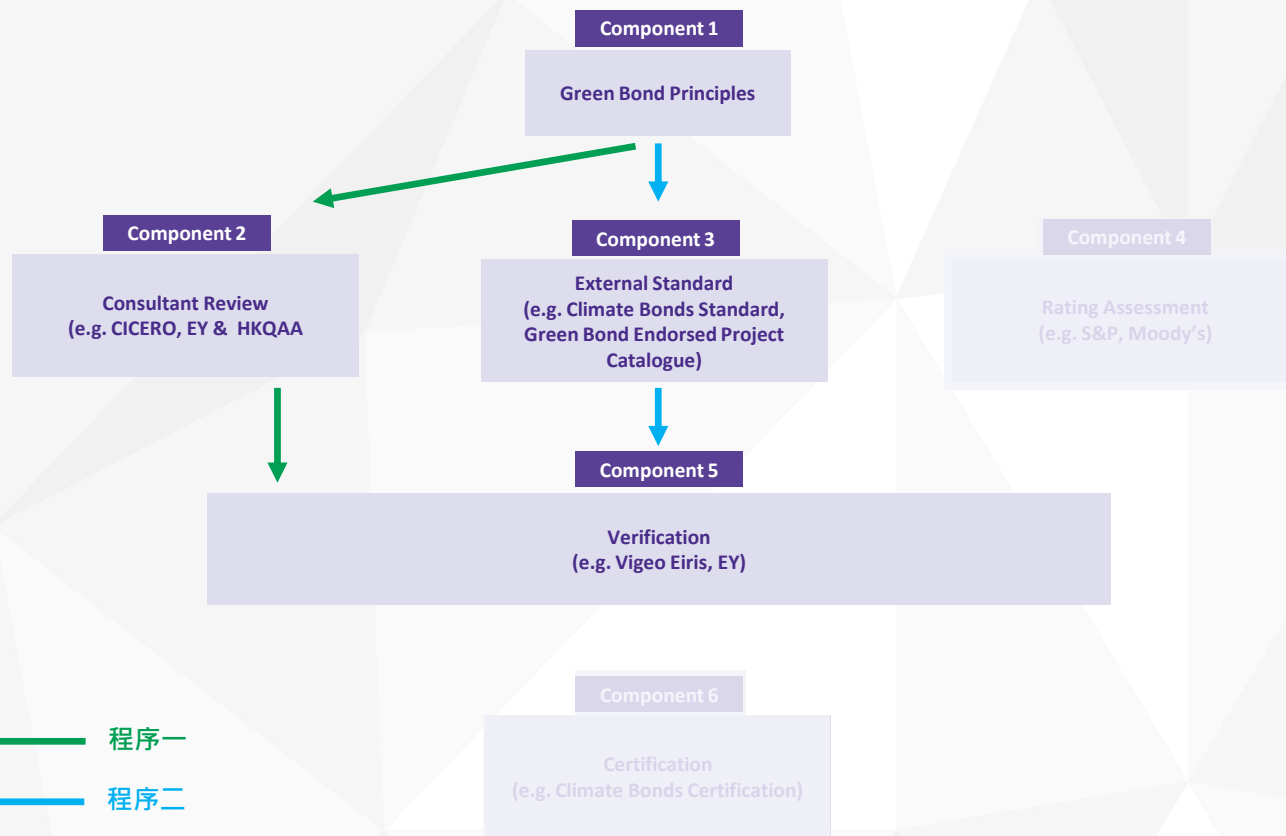
Considerations for the Government





Consideration 1

Bonds to be recognised as a Qualifying Green Bond (QGB) via processes 1 and 2



程序一

程序二

- The Government can consider **recognizing independent consultants** (e.g. HKQAA, CICERO) and companies for verification (e.g. Vigeo Eiris, EY) as **qualified parties**

- Bonds that have obtained review against **Climate Bonds Standard or Green Bond Endorsed Project Catalogue** can qualify as QGBs



Consideration 2

Provide subsidy on costs of external review of green bonds

Issuing green bonds incurs **monetary costs for external review**, which can hold potential issuers back

Providing subsidy to issuers for bonds which have their green bond frameworks successfully reviewed against **recognized standards or by qualified parties under the QGB scheme**

The subsidy can reduce the costs of external review of a green bond

The Government can incentivise institutional investors' involvement in green finance by providing **tax incentives** for QGBs



Consideration 3

Issue government green bonds



- All new public housing projects and new major government buildings are expected to meet at least Gold level standard under **BEAM Plus**, a local green building certification scheme



- The Government can consider financing the **construction** costs by issuing government green bonds. Also, **Retrofitting** of government and public buildings can be financed via issuance of government green bonds
- The **Hong Kong Mortgage Corporation (HKMC)** can issue long-term green bonds to acquire owner-occupied residential mortgage from banks. The underlying properties of the mortgages should be rated Gold or above under BEAM Plus.



Consideration 4

Align HKMA investments with the UNPRI



- **The Principles for Responsible Investment supported by the United Nations (UNPRI):** signatories contribute to developing a more sustainable global financial system
- UNPRI have more than 2000 signatories, including organisations managing government reserves



- Although the primary mission of the HKMA is to maintain stability for the currency of Hong Kong, we believe **the HKMA can specifically be more flexible with its investments decisions on 33% of its assets**
- The HKMA should consider introducing the endorsement of the UNPRI as a major area of assessment for its future Requests for Proposals, against a backdrop that the **HKMA employs external managers for around 26% of the Exchange Fund's assets**



Consideration 5

Promote listing of green bonds at the Hong Kong Stock Exchange

Joining the UN's Sustainable
Stock Exchanges (SSE)
initiative as a Partner
Exchange



Include investment in and
issuance of QGBs as part of
ESG reporting

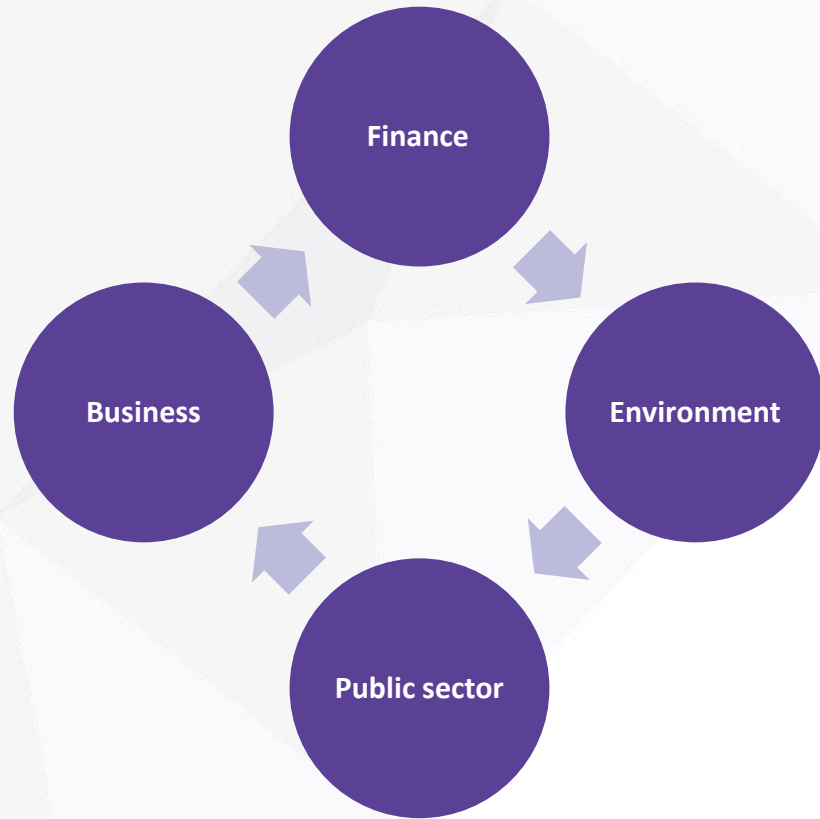


Collaborating with index
companies to establish green
bond indices



Consideration 6

Establish an inter-departmental committee



- Development of green bonds require expertise from the financial and environmental sectors, along with collaboration efforts from the business and public sectors

- Members of the inter-departmental committee are expected to be **secretaries of bureaus and heads of departments**, chaired by a person who is able to coordinate different bureaus



Consideration 7

Enhance communication with the Chinese Central Government and international promotion



- The Government can promote its potential in developing green finance, channeling investments between the mainland and overseas

- Implementing **the Southbound Trading of the Bond Connect** sooner rather than later to advance opportunities of the mainland investors



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Hong Kong, an international financial centre, can leverage its competitive advantages to facilitate the flow of capital for global green finance