Green Finance: China and G20 Initiatives

MA Jun, Ph.D.
Director, Center for Finance and Development, Tsinghua University
Chairman, China Green Finance Committee
Co-Chair, G20 Sustainable Finance Study Group
July 2018
Why green finance

China’s green finance guidelines

Examples of China initiatives

G20 Green/Sustainable Finance Study Group
Global comparison of PM2.5 (air pollution) index

图 1：PM2.5 全球地图：五年平均水平（微克/立方米）

PM2.5五年平均浓度（微克/立方米）

资料来源：美国国家航空航天局（NASA）；注：数据年份为2001-2006
PM2.5 index by city, 2013

Source: www.pm2d5.com, WHO
Professors from Beijing and Tsinghua Univ. show that air pollution due to coal burning in Northern China causes a reduction in average life expectancy by 5.5 years.

A study by ADB and Tsinghua Univ. indicates that the economic cost of air pollution amounts to 3.8% of GDP per year.

75% of water sources are contaminated.

20% of arable land is contaminated.
Global carbon emission

Source: British Antarctic Survey
Over the past century, temperature rose by 0.5-4 degrees in most of the world.

Source: British Antarctic Survey
Global warming and burning of fossil fuel

Source: British Antarctic Survey
Global Impact of Climate Change

• Dark red parts indicate projected drought conditions in the 2060s

Economic cause of pollution/emission: polluting industry, energy and transport structures

Source: Ma Jun and Li Zhiguo, 2014, Economics of Tackling Air Pollution in China, China Econ Press
China’s fiscal budget can only finance less than 10% of green investment, now estimated at RMB4tn per year.

[Source: Green Finance Task Force]
Need for a green financial system to mobilize private green investment

- The lack of green investment is due to the fact that positive environmental externality cannot be fully internalized by the market, and thus returns of green projects are not sufficient to attract private investment.
- Given that many countries’ fiscal capacity to correct the externality is constrained, a green financial system is needed to channel and incentivize private investment in green projects.
Roles of a Green Financial System

01 Enhancing green investment return
02 Reducing return on polluting investment
03 Increasing investor/consumer preference for green assets/products
China launched the world’s first “green finance policy package”

- August 2014: Launch of Green Finance Taskforce by PBOC
- September 2015: “Establishing a Green Financial System” became an official mandate from Central Party Committee and State Council.
- July 2017: Five provincial green finance pilot programs launched by the State Council.
- 2018-: # of corporate members of China’s Green Finance Committee reached 220. They manage 75% of China’s financial assets
Guidelines for Establishing the Green Financial System (Aug 2016) presents a policy roadmap:

- PBOC relending, interest subsidies/guarantees for green Lending;
- National and regional green development funds;
- Developing the green bond market;
- Developing green equity indices & products;
- Introducing mandatory pollution liability insurance;
- Introducing mandatory disclosure requirement for listed companies;
- Developing the carbon finance market;
- Promoting international collaboration on green finance
1. China became the world’s largest green bond market in 2016

- China launched its green bond market at end-2015 by the PBOC doc 39 and the green bond catalog by the GFC.
- In 2016, China became the largest green bond market in the world, issuing RMB230bn (or USD34bn) in green bonds, accounting for 40% of global issuance.
- In the past two years, China has issued more than 200 green bonds, and created an eco-system of green bonds, including green bond catalog, verification system, disclosure requirement, and impact measurement.
Over the past few years, China launched at least 50 green funds by local governments and 200 green funds by private sector.
3. Green equity indices and green bond indices

China’s securities index companies have developed 18 green equity indices.

<table>
<thead>
<tr>
<th>INDEX</th>
<th>SHORTHAND</th>
<th>LAUNCH TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSE Corporate Governance Index</td>
<td>Governance index</td>
<td>2008.1</td>
</tr>
<tr>
<td>SSE 180 corporate governance index</td>
<td>SSE 180 GV</td>
<td>2008.9</td>
</tr>
<tr>
<td>SSE Social Responsibility index</td>
<td>Responsibility index</td>
<td>2009.8</td>
</tr>
<tr>
<td>China Low Carbon Index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECPI ESG 40 Index</td>
<td>ECPI ESG 40</td>
<td>2010.9</td>
</tr>
<tr>
<td>CSI China Mainland Low Carbon Economy Index</td>
<td>Mainland L-C Index</td>
<td>2011.1</td>
</tr>
<tr>
<td>CSI ECPI ESG 100 Index</td>
<td>ECPI ESG 100</td>
<td>2012.9</td>
</tr>
<tr>
<td>SSE Environmental Protection Industry index</td>
<td>SSE Environmental Protection</td>
<td>2012.9</td>
</tr>
<tr>
<td>CSI Environmental Protection Industry Index</td>
<td>CSI Environmental Protection</td>
<td>2012.9</td>
</tr>
<tr>
<td>CSI environmental governance index</td>
<td></td>
<td>2014.6</td>
</tr>
<tr>
<td>CSI New Energy Vehicles Index</td>
<td>New Energy Vehicles</td>
<td>2014.11</td>
</tr>
<tr>
<td>CSI New Energy Index</td>
<td>CSI New Energy</td>
<td>2015.2</td>
</tr>
<tr>
<td>CSI Environmental Protection Industry</td>
<td>CSI Environmental Protection</td>
<td>2015.4</td>
</tr>
<tr>
<td>CSI Nuclear Energy &amp; Power Index</td>
<td>CSI Nuclear Energy &amp; Power</td>
<td>2015.5</td>
</tr>
<tr>
<td>CSI AEF Ecology 100 Index</td>
<td>Ecology 100</td>
<td>2015.10</td>
</tr>
<tr>
<td>SSE 180 carbon efficient Index</td>
<td>SSE 180 carbon efficient</td>
<td>2015.10</td>
</tr>
<tr>
<td>CSI 50 index of Environmental protection of Metasequoia</td>
<td></td>
<td>2016.5</td>
</tr>
<tr>
<td>CSI Sponge Cities Index</td>
<td>CSI Sponge Cities</td>
<td>2016.7</td>
</tr>
</tbody>
</table>
4. PBOC introduced green re-lending facilities and green MPA

- In 2017, a green relending facility was introduced by the PBOC to provide low-cost funding to banks for them to lend to green projects.

- At end 2017, the PBOC introduced green MPA system where by banks with higher proportion of green loans and banks that have issued green bonds are given higher MPA scores, which could translate into monetary awards.
5. Five provincial green finance pilot programs launched

Local governments/institutions introduced green loan subsidies, green project guarantees, specialized green finance institutions, and many new products.
Disclosure of environmental information by listed companies will allow investors to identify who is green and who is brown.

China has announced a roadmap for introducing compulsory environmental information disclosure requirement for listed companies in three steps: mandatory for major polluters (2017); semi-mandatory (2018); mandatory for all (2020).
7. China will soon launch compulsory pollution liability insurance

**Challenges**
- Over 500 environmental incidents per year in China

**Benefits**
- Reveal future environmental costs
- Ensure funds for remediation
- Reduce probability of incidents

Government will soon promulgate “rules on mandatory environmental liability insurance” in sectors of high environmental risks
8. China encourages financial firms to conduct environmental risk analysis

ICBC developed a model on environmental stress testing, the first of its kind for banks

对于火电企业，虽然环保标准趋严对火电行业产生较大成本压力，但受益于宏观经济平稳发展，以及中国工业化进程产生的巨大电力需求，未来火电行业整体仍将保持稳定发展。环保标准提高将对火电行业产生结构性影响，尤其是对中小型企业形成较为明显的财务压力。
Tasks for the coming years

- **Capacity building** at the local level and within small- and medium-sized financial institutions;
- **Product innovations** needed to address specific green finance demands: e.g., green building insurance; green ABS; collateralized lending on emission rights; green VCs/incubators; ESG investment products
- **Application of fintech** to drastically reduce the costs of green labeling and verification
- **Sharing of environmental information** (e.g. making corporate environmental compliance information to banks)
China proposal to establish the G20 Green Finance Study Group was approved in Dec 2015;

“Developing green finance” is included in G20 Leaders’ Communique, mainstreaming the concept of green finance among global leaders and financial community;

Global impact already felt as many countries, inspired by the G20 work, have launched their domestic green finance policies and roadmaps since 2017.
G20 GFSG in 2016: 7 options to promote green finance

1. Provide policy signals to support green investment;
2. Promote the adoption of green finance principles;
3. Expand capacity building networks (e.g., SBN/PRI);
4. Develop local currency green bond markets;
5. Promote cross-border green investments;
6. Develop risk analysis capacity;
7. Improve measurement of green finance.
G20 GFSG in 2017: 2 more options to promote green finance

1. Encourage financial institutions to conduct environmental risk analysis (ERA);

2. Improve the availability and relevance of publicly available environmental data (PAED).
G20 SFSG in 2018: 3 new topics are being studied

1. Securitization of sustainable assets;

2. Development of sustainable PEs and VCs;

3. Application of fintech to scale up sustainable finance.
G20 Green Finance Synthesis Reports and Background Reports

Available via the following hyperlink:

http://unepinquiry.org/g20greenfinancerepositoryeng
G20 spillover 1: China-UK green finance taskforce

1. Developing voluntary principles for green Belt & Road investment;

2. Launching a pilot program for environmental/climate information disclosure by China/UK financial institutions;

3. Promoting securitization of green loans;

4. Demonstration green assets deliver better returns.
G20 spillover 2: Central banks network on greening the financial system

Launched by eight central banks, including Bank de France and PBOC, this network will look into:

1. Options to encourage environmental/climate information disclosure and environmental risk analysis by financial firms;

2. Measures to incentivize and scale up green finance; and

3. Macro and financial stability implications of climate changes.
Spillover 3: Global Green Finance Leadership Program

• First event of the leadership program (in May 2018) co-hosted by Tsinghua University, IFC, and CCICED; Attracted 120 participants from 35 developing countries.
• Established nine working groups – such as green taxonomy, financing green agriculture, financial green SMEs, green incentives, and green fintech applications;
• Developed a website (www.gflp.org.cn) that contains news reports and publications on green finance;
• The leadership program will evolve into a global platform for knowledge-sharing on green finance.
Global Green Finance Leadership Program