

# A Brief Discussion of Green Accounting With Reference to the National Carbon Emissions Trading Scheme

Financing Green Infrastructure in the Greater Bay Area

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# Green Finance

## Scale, Scope and Description

- The scale, scope and description of China's understanding of Green Finance are contained in three foundational documents
- The PBoC's First Report on A Green Financial System – April 2015 – “Establishing China's Green Financial System” – published in conjunction with the United Nations Environment Programme
- The G-20 Green Finance Synthesis Report – July 2016 – co-authored by the PBoC and the Bank of England and signed off by the G-20 at the G-20 leaders' summit in Hangzhou in September 2016
- The PBoC's Second Report on A Green Financial System – September 2016 – “Guidelines for Establishing the Green Financial System”

# Three Key Points from These Reports

- Ma Jun, the then-Chief Economist of the PBoC estimated that total investment needed to clean up China's environment and meet its commitment of achieving peak carbon emissions by 2030 was 3tn Yuan (around US\$450bn) annually, equivalent to 4% of 2016 nominal GDP
- 85% of this expenditure would come from non-governmental sources
- Green Finance requires efforts to internalise environmental externalities
- How do you mobilise such a huge sum without the government paying for it?
- Part of the answer lies in how China has chosen to define Green Accounting

# The Role of Green Accounting

- Green Finance is not just sourcing and applying funds
- In China, the scope of Green Finance is very broad and includes the introduction of mandatory accounting principles
- These accounting principles are designed to mobilise and direct capital to achieve defined environmental objectives
- This is done through tilting the playing field to positively reward good environmental practice and penalise sub-performance

# The National Carbon Emissions Trading Scheme

- The National Carbon Emissions Trading Scheme (NCETS) was announced in December 2017 in semi-complete form to enable the framework to be approved at the NPC in March 2018 as part of a larger policy package, with the details to be added later
- China has operated seven regional pilot carbon markets since 2013 covering many sectors
- The NCETS was originally intended to cover eight sectors, but this was slimmed to three and then to one, just power generation, at the launch of the national market
- This narrower focus and the delay in announcing the baselines for each operator evidence the technical complexity of starting the project with accurate data
- Nevertheless, the amount of emissions overseen through even this narrow focus is still huge, with power sector emissions in China exceeding the total emissions covered in the EU ETS by three times
- Over time, the other seven sectors will be built into the scheme – target date 2020

# Accounting Standards Under the NECTS

- The following is a synopsis of the new accounting standards based on what is currently known
- Since 2005, China has rewarded improvements in emissions efficiency by awarding Certified Carbon Emission Rights (CCERs)
- These are property rights that reward efficiency gains or emissions cuts ex-post combustion
- Under the NECTS, companies will be given Emission Rights (ERs) ex-ante combustion
- These are a new class of property rights that give the owners the right to undertake bulk combustion such as at a power station
- The key point of these new property rights is that users will “own” their emissions, and with ownership comes responsibility and obligations

# Pricing Emissions

- The government intends to achieve a unified “carbon price” for emissions
- The expected price of allowances under the national ETS in the initial phase to 2020 is 30 Yuan per tonne (US\$4.5-US\$15) (per Jiang Zhaolie, Deputy Director General of the NDRC, October 2016) rising to 100 Yuan per tonne in 2030
- China intends to create a managed price of carbon starting at 30 Yuan and rising to 100 Yuan in 2030
- Thus, China will create a capital value for the new property rights calculated as the number of ERs multiplied by the price
- This capital value will be included into company balance sheets, initially improving asset-liability ratios
- But with this capital-creation comes obligations

# The Role of ERs

- ERs will be treated as assets
- As such they can be used as collateral for loans to pay for the capex to achieve the necessary engineering efficiencies to achieve lower emissions
- Power generators will be required to reduce emissions by a target set annually by the government
- As each year passes, regardless of whether the target has been met, so the number of ERs will be reduced each year



# The Accounting Consequences of Achieving and Under-Achieving

- If the power generator exceeds his target, he will have surplus ERs which can either be warehoused (unrealised gain) or sold (realised gain)
- If the power generator fails to meet his target, he will be required to buy in ERs from another company, which will become increasingly expensive, thus reducing its profits, and, in the cases of major under-performance, push the company into a loss and ultimately closure
- The profit performance of mainland power generator's will become a reflection of their ability to include environmental performance at the government's mandated rate within their operating performance
- Thus, the accounting system is asymmetric, and can be set to disproportionately reward out-performance and punish under-performance

# The Expected Outcomes of Green Accounting

- This is a totally new, cutting-edge form of accounting coupled to mandatory environmental standards – internalisation of externalities
- China is seeking to enforce that environmental discipline overlays financial discipline
- The maximisation of profit can only be achieved through the maximisation of environmental performance
- In the case of the NECTS, the consequence will be to oblige non-government capital to be applied to emissions reduction
- The degree of asymmetry has yet to be announced, but will be mandatory

# Huge Opportunity for Hong Kong

- The implementation of Green Accounting is a huge opportunity for Hong Kong
- Measurers and validators – China will need a small army of certified measurers and validators of emissions to make this system work – financial and environmental audit function – HK universities, institutes and colleges can fill the gap
- Solutions providers – China will need a large number of engineering and emissions efficiency experts to achieve the large number of solutions required
- Financial understanding – securities firms, asset managers, accountancy firms, consultants and others will need to be able to prepare and interpret accounting statements based on these new principles if they are to ....
- Source funds from outside China and apply them into China ....
- At the correct valuation
- Hong Kong has the opportunity to act as the intermediary which gives overseas investors the confidence to invest in China
- We need to be able to explain this Scheme and the parallel accounting systems to the rest of the world and provide evidence how the application of capital to solve environmental issues can be profitable in the GBA and beyond to the whole of China