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# Hong Kong Economic Policy Green Paper 2022

# Hong Kong as an International Carbon Trading Hub

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**Introduction: Sustainable Investment and Carbon Trading**

Many corporate executives used to view environmental, social and governance (ESG) initiatives as sole contributions to society and often considered them as resource drains or corporate expenses. Recent research and company reports show that firms' ESG and green finance strategies could be profitable and yet socially beneficial. For instance, ESG strategies can help companies win the war for talents, connect with clients, create social media sound bites, and display their concerns for local communities. As such, many companies have recently engaged in sustainable or green investment and financing. Critics are concerned about the potentially distortive effects of companies' green investment and funding strategies. Some simply refer to them as "green washing" activities and remain doubtful about their actual social benefit.

This study aims to share some preliminary views about developing Hong Kong as a carbon trading hub based on other countries' or regions' policies and experiences. Carbon trading can be classified as either "compliance" or "voluntary". According to the United Nations' Framework Convention on Climate Change in 1992, carbon trading refers to a country, region or enterprise obtaining the right to emit pollutants. Twenty-nine years later, at the 2021 United Nations' Climate Change Summit (COP26), governments and enterprises jointly formulated a path to achieve net zero emissions by 2050 in order to prevent the Earth from warming by more than 1.5°C. The global carbon price was $51.45 per ton of carbon dioxide by the end of 2021, but according to IHS Markit, the carbon allowance price is estimated to have to reach $147 per ton of CO2 in order to meet the 1.5°C target. In other words, the potential of carbon pricing is largely untapped, and most carbon prices are too low to drive large-scale decarbonization.

Carbon trading is a market-based emission-reduction and thus energy-saving solution. The government formulates and controls the total amount of pollution and allocation mechanism, while enterprises obtain allowances according to regulations and their needs to decide whether and how many pollution allowances to purchase or sell in the trading market. For example, although the leading electric vehicle producer Tesla was excluded from the S&P 500 ESG Index this year, its total annual profit in 2021 was US$5.519 billion, of which US$1.465 billion or a quarter of the company's total profits was from selling carbon credits. In sum, carbon trading will be an important part of corporates' strategies and countries' carbon reduction in the future.

There are important advantages of using carbon-credit trading to achieve carbon emission goals rather than relying on a carbon tax or cap. Theoretically, carefully designed individualized carbon taxes can help regulators achieve desired carbon emission goals. However, for such taxes to be effective, regulators need to have good information about the benefits individual companies derive from carbon-emitting economic activities and the costs associated with their emission abatement, which is unrealistic. The regulator may also impose an overall quota, break it down into individual quotas, and allocate them to different companies. Similar to carbon taxes, without good information about individual companies, the imposed quotas will be ad hoc and unable to reflect individual companies' different environmental impacts. Also, when some firms face hard constraints to meet production goals, e.g., due to contractual obligations, they would pay a fine instead of complying with the quotas issued to them.

A carbon trading system, on the other hand, allows companies to buy or sell the rights to carbon emissions based on their individual needs. Given the equilibrium price for the carbon credit, companies deriving the higher benefits per metric ton of CO2 emission will buy the credit to increase emissions while those who derive lower benefits will sell the emission right. This way, the right to pollute will be used by companies that can generate the highest economic benefit from the emission. Therefore, even if the carbon credits are not allocated according to the companies who need them the most, the trading system ensures they'll be bought by them. Allowing companies to produce carbon offset credits further enhances the system. This policy encourages companies that can most cost-effectively offset emissions generated by others to do so, further enhancing the economic efficiency for any given level of carbon emissions permitted.

A good case study for Hong Kong to consider is Switzerland's dual-track policy approach, which has combined carbon trading and a carbon tax since 2008. Switzerland's approach to reduce carbon and develop a carbon trading market can be roughly divided into three stages over a decade:

Phase (1): Switzerland implemented voluntary carbon emissions trading from 2009 to 2012, aiming to reduce carbon emissions by 8% compared to 1990.

Phase (2): From 2013 to 2020, Switzerland switched to a mandatory carbon trading system, with a targeted reduction of 1.7% of the quotas each year, and with 5% of the quotas reserved for auctions or newly registered companies. A carbon tax system was implemented concurrently. Companies engaged in carbon trading would be exempted from carbon tax from 2013 to 2020.

Phase (3): The Swiss carbon market was linked to the EU carbon market from 2020.

As revealed by the approach adopted by Switzerland, the establishment of links between different carbon markets comes with scale effects and can generate more trading opportunities. Compared to the EU, the Swiss carbon market was small and less liquid, with much higher allowance prices. It enhanced its competitiveness through cooperation with the EU carbon market.

**Carbon Trading - An Indispensable Element to Consolidate Hong Kong's IFC Status**

The main push by Hong Kong policymakers and financiers towards carbon neutrality has been based on various green financing initiatives to encourage companies to invest in projects with certain ESG-friendly measures. For example, the MTR's construction of the eastern section of the South Island Line will reduce carbon dioxide emissions by about 21,000 metric tons per year. If a carbon trading platform can be established in Hong Kong and a mechanism for corporations to earn carbon credits is developed, then companies like MTR can use its competitive advantage to profit by trading credits, in addition to doing good for society. Capital markets can then convert tradable carbon rights into retail exchange-traded funds (ETFs), such as one of the largest asset management (by assets under management) voluntary carbon trading ETFs, KraneShares Global Carbon ETF (ticker: KRBN). Since its launch in July 2020, the net asset value under management already exceeds US$1 billion. In the past two years, the fund price has grown by over 120% (up to end of July 2022).

Many companies in Hong Kong's capital market have the potential to participate in carbon trading, such as many world-leading companies in the electric vehicles and new energy industries. Currently, there are limited carbon trading markets in Asia except Mainland China. An open and well-functioning carbon market can be an important attraction for global capital. Riding on the trend in global banking and finance on developing carbon trading and strengthening ESG-related disclosure, a potential carbon trading market in Hong Kong can attract more green capital and new energy companies to raise funds and get listed in Hong Kong. Regulators should encourage companies to use ESG disclosure as a business strategy to connect with global markets and attract more foreign capital. In addition, we also need to think about how Hong Kong, as a 'super-connector', can introduce funds for mainland enterprises to 'go global' and raise funds through their green finance listings.

**Suggested Strategies**

***Strategy 1: Facilitate Public Private Partnerships (PPP), Use Blockchain Technologies, and Articulate International Standards to Avoid Greenwashing***

The "Green and Sustainable Finance Inter-agency Steering Group" of the Securities and Futures Commission (SFC) recommended policymakers to strengthen the current requirements for corporates to disclose their ESG engagement, improve the

monitoring of fund managers' sustainable investment procedures, and build a regulatory framework for carbon markets. These recommendations aim to turn Hong Kong into a green capital market. A sustainable investing cycle involves investment guidelines, asset allocation decisions, portfolio construction, portfolio management and monitoring, active ownership engagement, as well as ESG reporting. The International Sustainability Standards Board (ISSB) aims to formulate the first set of international sustainability standards by the end of 2022 or early 2023. This transition period is a critical time for policymakers, capital markets, and enterprises to deepen their understanding on sustainable investment and equip themselves to meet a new era of carbon trading.

Currently, around 90% of global carbon credit transactions is processed by Xpansiv, a U.S. based carbon trading platform. Consider a carbon trading transaction that can achieve a metric ton reduction of carbon. Both sides of the transaction face the problem of computing the liability associated with the carbon emitted over a certain period and determining which authority will measure the amount of carbon emission reductions. There is currently no single authoritative standard for net zero emissions. Some organizations state that they have achieved net-zero emissions by adopting certain green energy or abatement technologies. Some purchase credits to offset emission at a minimum price, while claiming to have achieved zero carbon emissions. Such differences in behavior pose major challenges for investors looking for more sustainable investments.

Building a carbon trading hub requires a carbon trading ecosystem. Hong Kong could leverage its reputation as an international financial center (IFC), its strong legal system, and its strength in Fintech to build an internationally recognized third-party verification system for companies' carbon emission and credits. It should also consider deploying blockchain technologies to relate a specific carbon credit to a gas emission based on a unique code. The blockchain-backed code can help market participants determine the value of the carbon projects. It also helps confirm that each unit of carbon is only calculated once and can be tracked for its entire "journey", from data collection, analysis, all the way to the verification stage of the project. Making good use of Hong Kong's existing strengths, the local bourse Hong Kong Exchanges and Clearing (HKEX) could consider establishing an official evidence-based greenhouse gas (GHG) emission reduction platform with a top-tier third party verification process. Given its mandates and expertise, HKEX is in a better position than private companies to establish a world's carbon trading hub.

***Strategy 2: Green Education: Include More Green Finance Courses in CEF Structure***

HSBC's 2021 Sustainable Financing and Investment Survey found that 40% of Asian institutional investors have difficulty investing in ESG due to the lack of expertise or qualified talents. Only 39% of the surveyed investors have an ESG investment or

corporate policy in place, significantly lagging behind 91% in Europe and 72% in the US. In Asia, green finance is an emerging industry and there are plenty of opportunities. More companies will want to be perceived as a contributor to sustainable development, including not only green investment and carbon trading, but also ESG reporting and auditing, community relations, as well as corporate social responsibility supply chain management. Such developments will likely increase the demand for a large number of ESG professionals, providing new job opportunities to the young generation as the industry's development takes shape. However, up to now, only limited number of courses related to sustainability are certified as Continuing Education Fund (CEF) courses, which reimburse students for part of their tuition fees. For example, international standards like GRI, BEAM Pro, LEED AP, WELL AP, CFA Green Investing, Certified ESG Analyst are highly recommended for green finance professionals. Policymakers should identify investors and provide support for continuous education on sustainable investment and carbon trading.

Universities in Hong Kong are also in a good position to contribute to green education. We hope to see new sustainability and ESG focused undergraduate and postgraduate degree and certificate programmes being offered soon. Filling the ESG talent gap in Hong Kong will play a critical role in the overall strategy of developing Hong Kong into a green finance and carbon credit trading hub.

***Strategy 3: HKEX as an Agent Building an Official Platform and Standards for the Carbon Trading Market and Connect with GBA***

In 2011, the national pilot scheme of carbon emission trading was launched in 7 provinces and cities across China. In 2021, the trading of the national carbon market was launched. A few key obstacles can be identified based on Mainland China's experiences. First, China's carbon market is mainly driven by emission control by companies with real carbon emission needs. Relatedly, there are not enough institutional investors trading in the market. Power generating companies, which have recently been affected by the squeeze between declining electricity prices but rising coal prices, would naturally prefer to participate more actively in carbon trading as a way to diversify risks.

Second, large price fluctuation among seven carbon market pilots in Mainland China is not conducive to the long term development of carbon markets. Low carbon prices will give people the illusion that reducing carbon dioxide emissions can be done at low costs. High prices are not good for carbon transformation. Carbon trading serves not only as a financial product, but also serves a social purpose. Effective pricing in an efficient market defined by transparency and liquidity is important.

Based on Mainland China's pilot scheme experiences, the key market regulators in Hong Kong should advocate lower management fees of various mutual funds and ETFs.

Many green funds and ETFs in Hong Kong currently charge more than 1%, which is usually higher than that in mature green financial markets such as Europe and the US. Meanwhile, the audit and assurance processes for carbon credits are still not fully developed due to the existence of many different standards in the global carbon trading markets. HKEX should aim to build an official platform for the Greater Bay Area (GBA) carbon market and provide professional ESG standards and audits, leveraging Hong Kong's IFC status. Efficient market pricing for emission reductions can encourage more companies to trade voluntary emission allowances through Hong Kong's carbon trading platform. The proposed carbon trading market should use fintech and blockchain technologies to develop a credible third-party verification scheme.

The current government's emission reduction policy is mainly based on the "Hong Kong Climate Action Blueprint 2050" released in 2021, with the promotion of the use of renewable energy and low-carbon power generation technologies as the main approach to offset carbon footprints. In addition, Hong Kong policymakers can consider the future role of Hong Kong in the Regional Comprehensive Economic Partnership (RCEP) and the GBA, particularly in China's carbon markets. The institutional interconnection of carbon markets with neighboring economies is also an important goal for policymakers to dismantle and loosen corporate barriers, so as to enhance the HKSAR's leadership in green finance and tackling climate risks.

**Conclusions**

The G20 finance ministers and central bank governors acknowledged last year that a carbon price is one of the important tools for tackling climate risks. Hong Kong's green finance and carbon trading developments are about a decade behind other mature financial economies such as Europe. It is time to catch up and contribute to the development of the green economy in Mainland China and the region. At the occasion of the 25th year anniversary of the HKSAR, we hope that stakeholders can jointly promote the development of the carbon trading market as a key part of the city's repositioned international financial center, which shall in turn create a variety of good jobs with upward mobility for the next generation.