



HONG KONG MONETARY AUTHORITY 香港金融管理局

Our Ref.: B1/15C

30 December 2021

The Chief Executive
All Authorized Institutions

Dear Sir / Madam,

Climate risk stress test

I am writing to share with you the results of a pilot exercise on climate risk stress test (CRST) completed recently by the Hong Kong Monetary Authority (HKMA).

Background

In light of the increasing threats of climate risks to the financial sector, the HKMA launched the pilot CRST in January 2021 with a view to assessing the climate resilience of the banking sector as a whole and facilitating the capability building of participating banks for measuring climate risks. The CRST comprised three scenarios, namely a physical risk scenario of worsening climate situation and two transition risk scenarios representing different pathways (i.e. disorderly and orderly) to a low emission economy.

Twenty-seven banks including 20 major retail banks and seven branches of international banking groups participated in the exercise. They accounted for 80% of the banking sector's total lending, forming a good basis for the HKMA to gain useful insights into the climate risk profile of the banking sector.

Results

The assessment results of the participating banks showed that climate risks could potentially give rise to significant adverse impacts on the banking sector. Expected credit losses of the banks' exposures directly affected by climate change, such as residential mortgages and lending to high emitting industries, were projected to increase sharply under the CRST scenarios, leading to a material reduction in the banks' profitability. The banks' capital positions would also deteriorate notably. The capital adequacy ratio of the domestic systemically important authorized institutions, for instance, would drop by 3 percentage points on average over the 5-year horizon under the disorderly transition scenario. Some parts of the banks' operations would also be disrupted by the more intense climate hazards under the physical risk scenario. Overall, the Hong Kong banking sector should remain resilient to climate-related shocks given the strong capital buffers built up by the banks over the years.

During the course of conducting the CRST, the participating banks endeavoured to enhance their capabilities in measuring climate risks as they went through the risk identification and assessment processes. A discussion forum organised by the HKMA also facilitated the banks' capability building by providing a platform for the banks to share their knowledge with the peers and learn good practices from each other. However, some major gaps identified in the exercise, particularly those concerning data availability and assessment methodologies, remain, owing to limitations such as the lack of widely accepted standards for risk identification and insufficient modelling expertise for this new subject.

Riding on the vulnerabilities and gaps identified in the CRST, the participating banks have developed plans to adjust their business strategies and strengthen their climate risk management in order to ensure their ongoing resilience against climate risks. These include strategic allocation of resources to climate resilient activities, such as green financing and providing transition finance to their customers' transition to a low-emissions business model, and the incorporation of climate risk factors into their risk management framework. They also undertook to keep abreast of market developments and put in continuous efforts to strengthen their capabilities for managing climate risks.

Way forward

In view of the gaps and challenges identified in the pilot exercise, the HKMA will continue to engage the industry to support their capability building and enhance the CRST framework for a more comprehensive assessment of the banking sector's climate resilience. The HKMA will actively explore opportunities to collaborate with overseas authorities to promote consistency and avoid duplicated efforts of banks in meeting regulatory requirements on CRST. The current intention is to undertake another climate risk stress test in two years' time.

A report summarising the results of the pilot exercise can be downloaded from the [HKMA's website](#). Should you have any questions regarding this letter or the report, please send your enquiry to crst@hkma.iclnet.hk.

Yours faithfully,

Raymond Chan
Executive Director (Banking Supervision)