



BIS Innovation Hub and HKMA investigate how tokenized green bonds can improve sustainable investment



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- The Bank for International Settlements (BIS) Innovation Hub Hong Kong Centre and the Hong Kong Monetary Authority joined forces with the tech industry.
- Aim is to build a prototype digital infrastructure that can enable green investments and help issuers and governments to meet environmental and sustainability goals.
- Work is guided by a panel of experts from public and private sector, civil society, and international community.

In many countries, issuing and investing in bonds can be cumbersome and complex, involving many steps and parties, and typically requiring a considerable financial commitment from the investor. For those investing in environmentally friendly projects, there is uncertainty about whether the bond issuer is delivering the positive green impact it committed to at issuance. Also, there are typically no liquid and transparent secondary markets for retail investors.

The Bank for International Settlements (BIS) Innovation Hub Hong Kong Centre and the Hong Kong Monetary Authority (HKMA) joined forces with the technology industry on Project Genesis to build a prototype digital infrastructure that enables green investments, improves transparency on the use of proceeds, and thereby helps meet regional and global environmental and sustainability goals.

“ Green and digital are not only interconnected but interdependent - the fate of one ”

depends on the other. Green finance, accordingly, is a key priority of the BIS Innovation Hub and Genesis is an integral part of that.

Benoît Cœuré, Head of the BIS Innovation Hub

The BIS Innovation Hub's first green finance project, Genesis will explore the tokenisation of green bonds enabling investment in small denominations, combined with real-time tracking of environmental outputs.

“ *The HKMA welcomes the collaboration with BIS Innovation Hub on this novel experimentation on the symbiosis of sustainability and tech. Technologies such as blockchain and smart contracts, combined with the internet-of-things, could streamline the bond issuance process, improve efficiency in distribution and facilitate reporting on the use and environmental impact of green bonds proceeds, thus enhancing transparency to green bond investors.* **”**

Edmond Lau, Deputy Chief Executive of the HKMA

Genesis will be developed together with six partner companies that will design the digital infrastructure. Targeting the full bond lifecycle, Digital Asset (Switzerland) and their partner GFT Technologies Hong Kong will deploy multiple permissioned blockchains. Concurrently, the Liberty Consortium, consisting of SC Ventures, Standard Chartered Bank and Shareable Asset, will be leveraging a public permissionless blockchain infrastructure. Allinfra, a Hong Kong SAR startup, will provide technology verified data that can track in real-time the positive environmental impact of projects.

“ *Our vision is that you can download an app to your phone, and invest any amount into safe government bonds, which will develop a green project – let's say a solar or wind farm. Over the bond's lifetime, you would be able to not just see accrued interest, but also track in real time how much clean energy is being generated, and the consequent reduction in CO2 emissions linked to your individual investment. Further, you could sell the bonds in a transparent market.* **”**

Bénédicte Nolens, Head of the BIS Innovation Hub Hong Kong Centre

With Genesis, the BIS Innovation Hub seeks to show the *green art of the possible* through combining blockchain, smart contracts, internet-of-things, and digital assets. The prototypes will allow policy makers and stakeholders to explore innovative approaches to green bond distribution and transparency. After starting with design thinking workshops, the development teams are now working in iterative sprints to build the prototypes, collaborating with key stakeholders in the Hong Kong financial ecosystem.

In consonance with the take-away from the  [BIS Green Swan research report](#) that climate change involves complex collective action problems that require increased coordination among governments, private sector, civil society and international community, Genesis is guided by a [multi-disciplinary panel of experts](#) in environmental, social and governance (ESG) considerations, green finance, bond markets, law and regulation. The results of the tests and prototypes will be published in the fourth quarter of 2021.