

Asia-Pacific Research Exchange Business Model Investment Series

Project Dynamo, a project exploring the programmability and transferability of digital tokens

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Abstract

In June 2023, the Bank for International Settlements (BIS) Innovation Hub released the reports of Project Dynamo, a project bridging the financing activities between institutional investors and small and medium enterprises (SMEs) in a supply chain.

Keywords: Stablecoin, Digital Token, Blockchain, Supply Chain, Business Model, Innovation, Technology

In June 2023, the Bank for International Settlements (BIS) Innovation Hub released the reports of Project Dynamo, a project exploring the programmability and transferability of stablecoins/digital tokens (collectively named the Digital Trade Tokens (DTTs) in the report) and how this could encourage and facilitate the provision of financing by institutional investors to small and medium enterprises (SMEs) in a supply chain.

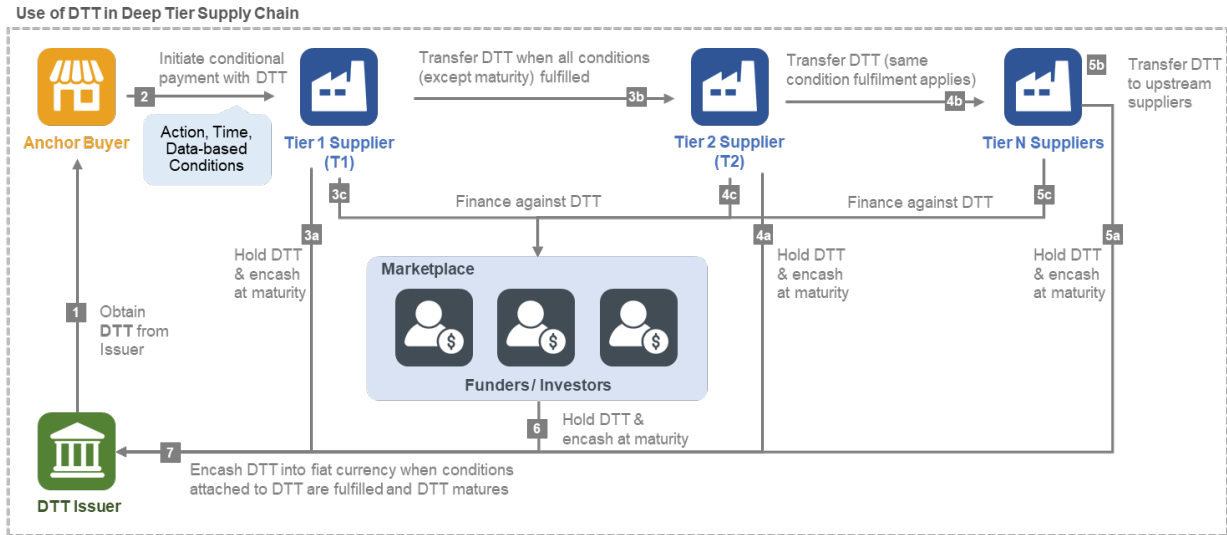
The project explored a wholesale use of stablecoins/digital tokens on the Ethereum public blockchain, linking digitalisation of trade with that of payments, SME finance, electronic Know Your Customer (eKYC) and Environment, Social and Governance (ESG) rating for supply chain by showcasing some of the latest developments in each of these areas.

Currently, SME suppliers in a supply chain often face challenges in obtaining finance from traditional funders to support their operations. This is primarily due to a lack of collateral and/or an established credit and operational track record. Project Dynamo demonstrated a potential innovative solution for addressing such funding challenge by introducing the use of DTTs for making programmable conditional payments in a supply chain.

As illustrated in the below graph, after entering into the purchase order, the buyer could purchase a DTT from the DTT issuer (which could be a commercial bank or a FinTech company) and transfer the DTT to the supplier. These tokens are backed 1:1 through ring-fencing it with a fiat currency. These tokens can also be backed by a letter of guarantee issued by the buyer or another bank in favour of the DTT Issuer on a 1:1 basis.

The buyer can program the tokens with time, action, and data-based conditions. Such conditions are coded on smart contracts on blockchain and the payments are automatically executed once the pre-set conditions are fulfilled. Upon receiving such a token, a supplier can keep the unrealised token till all conditions are fulfilled as programmed on the DTT and encash from the DTT Issuer. Alternatively, prior to the fulfilment of these conditions, a supplier can also sell it to an institutional investor (similar to factoring an invoice), or transfer the token to an upstream supplier to settle its debts or payables owed to the upstream supplier. The upstream supplier has the same options, and so on throughout the supply chain.

When all pre-set conditions on a token are met, the token holder(s) receives payment, and the token is burned. The DTTs are deemed as non-fungible tokens (NFTs) because the ECR721 token standard is adopted.



References

https://www.bis.org/about/bisih/topics/open_finance/dynamo.htm

About the Author

Kenneth Kwong, CFA, is a member of Web 3 Committee at CFA Society Hong Kong. He had experience in traditional banking and finance, covered institutional clients in the digital asset space and studied cryptography in Peking University.

