Project Dynamo
Driving SME Financing Through Digital Trade Tokens

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Issue: SMEs Face Great Difficulties in Accessing Financing

SMEs are lifeblood of most, if not all, economies.

- Business: SMEs, >90%
- Employment: SMEs, >50%

A significant role in the global supply chain

Great difficulties in accessing financing, especially on affordable terms

In developing countries alone

Unmet 5.2 Trillion per year

~1.4 times of current level of global MSME lending

No access to formal credit

>50%

High priority for many governments and central banks around the world

SMEs, >90%
Project background

The 2020 Trade Finance TechChallenge, a joint initiative conducted by the BIS Innovation Hub Hong Kong, China Centre and the Hong Kong Monetary Authority (HKMA), provided insights into the needs of and challenges faced by SMEs when accessing trade finance. Based on these insights, the BIS innovation hub conducted applied technology research into different potential and innovative solutions for SME finance.

As part of the research, Project Dynamo, a joint project by the BIS Innovation Hub and the HKMA, delivered a ground-breaking prototype for a compliant use of single-currency pegged stablecoins / digital tokens and blockchain / smart contracts in supply chain finance for SMEs.

Key areas explored

- Token programmability and transferability
- How tokens encourage and facilitate the provision of financing by institutional investors to SMEs in a supply chain
- The use of ESG in payment

Project Participants

- Linklogis International
- Standard Chartered
- RD Technologies
- MioTech
- Simmons & Simmons

Observing Members

- Asian Development Bank
- Bank Negara Malaysia
- Bank Indonesia
- Bank of Thailand
- International Chamber of Commerce
- University of Hong Kong
- World Economic Forum
- World Trade Organization

Project Report and Video
Dynamo vs Existing Solutions

**Dynamo vs Existing Solutions**

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### Traditional Financing Options

**Receivable Financing**

Supplier-driven financing poses higher risks to financiers, such as double financing, as it lacks buyer involvement.

**Payable Financing**

Anchor buyer-driven financing typically assists 1st Tier suppliers (who sell directly to the Anchor) in obtaining financing by leveraging the Anchor’s credit. However, this financing option is limited to 1st Tier suppliers only.

**Deep Tier Financing**

Some efforts have been made to assist upper-tier suppliers in obtaining financing, utilising technology to connect them with Anchors, but adoption is limited outside of China.

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### Key Challenges

- Settlement is silo; Difficult to control repayment at maturity
- Limited cross-jurisdiction adoptability for deep tier financing, as resulted from heavy reliance on commercial contracts among suppliers

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### Proposed Solution in Project Dynamo

**Digital Trade Token**

Unified solution to combine payment, financing in one digital asset

- Conditional Payment
- Conditions: Action + Time
- Financing of Future Receivables

- Automated
- Transparency
- Fairness
- Sustainability
DTT Tokens Are Sent with Conditions

**Timing**
- On Date
- Before Date
- On T+X
- Period of X to Y

**Shipment**
- Status
- Location
- Title

**Delivery**
- Status
- Acceptance Notice

**Action**
- Acceptance (Full/Partial)
- Rejection
- Submit Doc
- 3rd Party Verify

**Discrepancy**
- DocCheck Status
- Discrepancy Acceptance

**Sustainability**
- ESG Score
- Carbon Gas Emission

Accommodate real-life trade conditions, with live data status.

Before conditions are fulfilled, the DTT recipient supplier will hold a Right of Receive.
‘Right of Receive’ (RoR) is a NFT generated to supplier, to symbolise the holder’s ability to receive DTTs shall all conditions fulfill.

Full flexibility to use RoR
1. **Transfer** to upper tier suppliers
2. **Finance** with financial institutions
3. **Keep** it until maturity

What’s in for Financiers?
1. Relevant data for NFT valuation e.g., Trade Conditions; Current Status; Data Tracking; Time to Maturity; Performance Risk
2. Finance supplier based on complete transparency of data
3. Maturity settlement is automated, reduced risk of double financing

*Please note, in the Project Dynamo report, we called the ‘Right of Receive’ concept as ‘Unrealised’ DTT. We changed its naming convention to ‘Right of Receive’ following commercial launch.*
Sustainability-Linked Payment (SLP)

**Linking Payments to Sustainability Goals**

By integrating ESG-related data into DTT's payment conditions, can enable anchors to motivate suppliers to meet specific ESG criteria. Suppliers are eligible to receive the 'incentive' only when their ESG performance aligns with expectations.

**Beyond Compliance**

SLP encourages suppliers to exceed regulatory standards and achieve sustainability goals by harmonising their objectives with the anchor’s sustainability vision. This creates an added incentive for suppliers to excel, driving positive change throughout the supply chain and fostering continuous improvement in the future.

**Transparency & Accountability**

By leveraging on the transparency and immutable nature of blockchain technology, SLP integrated into DTT will significantly improve transparency in sustainable supply chain practices. This enhanced visibility ensures accountability among supply chain partners, fostering trust and confidence in the sustainability initiatives.
Project Dynamo integration of ESG-related data and incentives promote responsible consumption and production, and climate action, exceeding compliance standards, enhancing transparency, and fostering continuous improvement in supply chain sustainability.
Planned roadmap of commercialization by Linklogis

2022
Mandated by the BIS in Project Dynamo

2023
Project Dynamo completion: Feasibility study on technology, commercial, legal and regulatory considerations

1H 2024
First count of commercial transaction, seeking formal regulatory approval for commercialization

2H 2024
Full scale roll out
Other BISIH projects directly relevant to Trade and Sustainability

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With mBridge, cross-border payments can be more inclusive and accessible by allowing direct, bilateral connectivity between the payer’s and payee’s local banks.

- Banks often lack direct relationships with offshore counterparties and must rely on a global network of correspondent banks to make cross-border payments.
- However, correspondent banks have been paring back their cross-border banking relationship, leaving many without sufficient or affordable access to the global payments network.
Project Aperta – revolutionising SME trade finance with cross-border Open Finance API interoperability of domestic ecosystems

The vision is to create a global gold standard for Open Finance, and hence foster more public good innovation in the space of cross-border consumer and SME finance.

Project Aperta aims to build a prototype of a multi-lateral API network platform to connect jurisdictions for cross-border financial data portability and payment enablement using standardized Open Finance APIs:

- foster cross-border interoperability between different regulated Open Finance API ecosystems
- drive digitization in trade by seamlessly sharing trade finance relevant data and services in a standardized way
- significantly reduce complexity, time and cost by simplifying cross-border activities, such as the identification, verification and creditworthiness of SMEs and the orchestration of payment flows.
Project Symbiosis – closing the data and financing gap for SME transitions with AI

**Problem**

- The financial industry notes that **limited data is often the main challenge in calculating and disclosing financed emissions**:
  - The data limitation is most acute for SMEs. In OECD countries, SMEs collectively account for at least 50% of GHG emissions of the business sector. But only 10% of SMEs currently measure their GHG emissions.
  - SME supply chain partners contribute significantly to Scope 3 emissions of large corporate buyers, who in turn are **typically funded by financial institutions (FIs)** through equity, bank loans, corporate bonds, project finance, mortgages etc., thereby creating financed emissions for such FIs.

- Project Symbiosis seeks to **reduce the Scope 3 information gap** by creating **AI supported methodologies for upstream SME emissions disclosure**.
- These same disclosures will be used for **connecting SMEs to adaptation finance**.

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**Data Sources**

- Automated data collection from anchor buyers and their suppliers
- Existing industry databases
- Big data

**Analytics Platform**

- Artificial intelligence
- Natural Language Processing (NLP) / Large Language Model (LLM)
- Algorithm to quantify supply chain emissions

**Actionable Intel**

- Aggregated emissions data
- Measured against industry benchmarks and best practices
- Opportunities to reduce emissions

**Data Sharing**

- Feedback loop to enhance the platform’s usability, effectiveness and efficiency
- Achieve economies of scale to ensure the platform’s commercial viability

**Bankable Solutions**

- Linking SME suppliers with financial institutions and other bankable nature solutions capital providers
- Technical as well as financial assistance

**Call to Action**

- Incentives for anchor buyers to reduce supply chain emissions
- Incentives to revamp supply chain
Thank You!

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