



mBridge Case Study: Interoperability with Digital Trade Finance Platforms

Nov-2021



In cross-border trade settlement, anti-money laundering (“AML”) screening is one of the crucial checking conducted by remittance banks. During the process, banks have to understand the underlying trade details which may have to be supported by supplemental information such as sales contracts, invoices and proof of delivery. After completed all the necessary checking, remittance transactions routing through different intermediaries’ clearing systems may be somehow processed with time constraint.

In this use case, we would illustrate how the efficiency of cross-border trade settlement can be enhanced when transacts between multiple Central Bank Digital Currencies Bridge (“mBridge”) as well as two inter-connected cross-border digital trade instrument platforms.

The two platforms used in this instance are both blockchain-based trade finance platforms, namely eTradeConnect formed in Hong Kong and the People’s Bank of China Trade Finance Platform (“PBCTFP”) formed in mainland China.

Current Challenges

Time Inefficiency

The cross-border remittance route may involve in various correspondent banks and clearing houses depending on the location of the sender and beneficiary. For banks with extensive network or strong intra-bank footprint, the whole process may only take several minutes to hours. However, if the ultimate beneficiary bank or correspondent banks are not in the network, it can then be a multi-day process.

Together with the other crucial checking of trade settlement, the whole payment cycle can be imaged not as a timely one.

Heavy Manual Process

International trade settlement is still in a paper-driven process even there is a good move of digitalization. Most of the mandatory trade documents are still in paper forms and some of them are in a great extend of variety formats. Notwithstanding the appliance of FinTech, e.g. Optical Character Recognition, the non-standardized and indecipherable documents still draw heavy manual judgement.

This traditional process also marks corporates time after they prepared the papers and information manually, which is simply for making a remittance or even for receiving a payment in some jurisdictions.

Cost Inefficiency

Depending on the location of payment sender and beneficiary, the usual remittance route may rely on various intermediaries' clearing houses. This may incur additional settlement costs during the whole clearing process to banks and in turn to the ultimate beneficiary.

Furthermore, there are also implicit costs embedded during the process of necessary trade instruments, for example the examination process for the checking of legal and regulatory compliance.

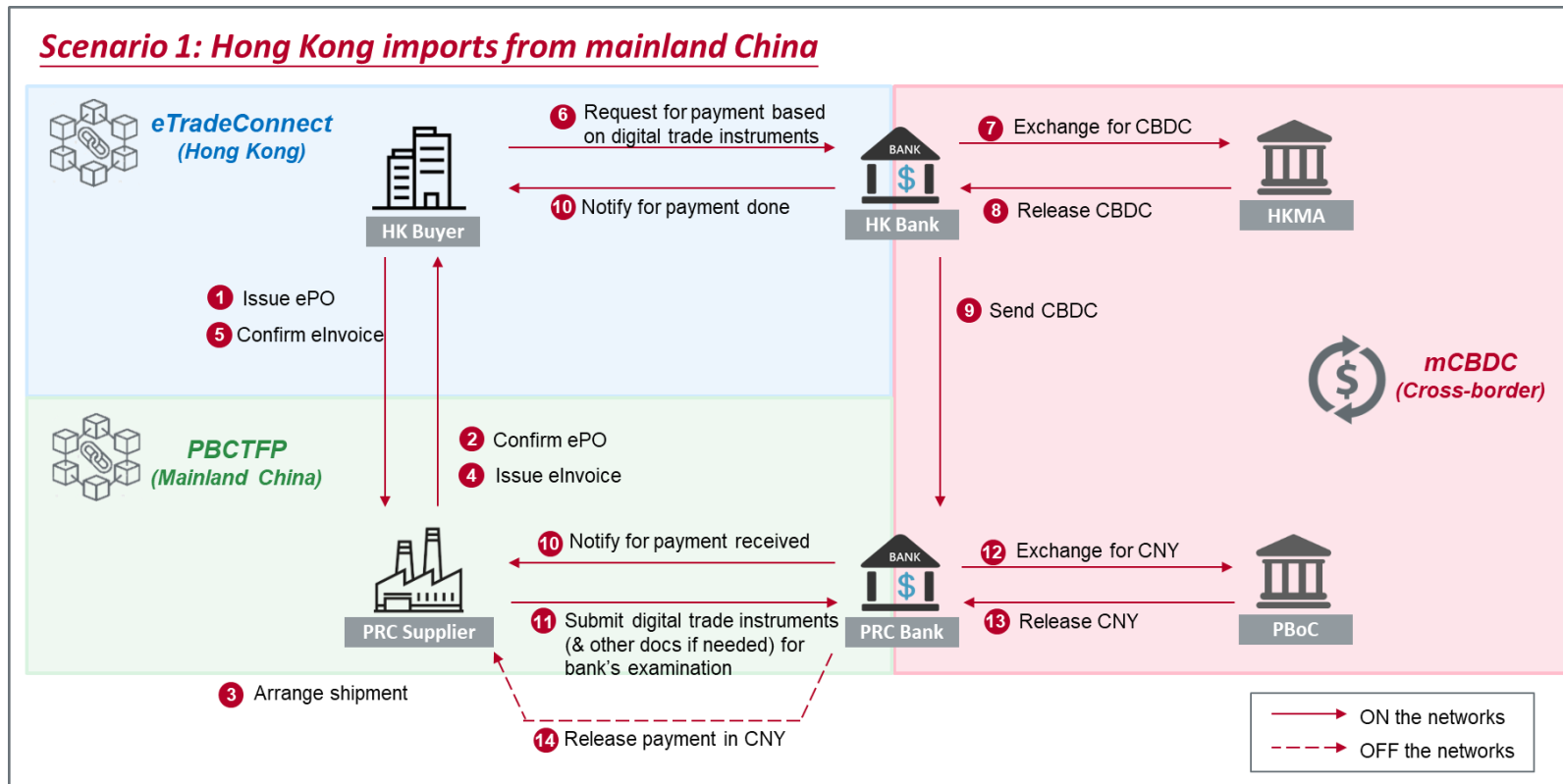
Difficulties in Risk Control

The legal and regulatory compliance is important for cross-border trade settlement. In order to fulfill all international and country-specific requirements, banks should have detailed examinations against the authenticity of trade transactions when processing the settlement of trade remittance.

Nevertheless the high standard of authenticity result, information for the checking are sometimes relied on corporate's own input and in paper forms. To equip with some suitable tools may improve the efficient of risk control as well as the proof of authenticity and validity.

Functional Designs

To reshape the cross-border trade settlement by leveraging the mBridge and the trade finance blockchain platforms, eTradeConnect and PBCTFP



Steps 1 – 5: HK buyer (i.e. importer) and its mainland supplier (i.e. exporter) process the ePO and eInvoice on the trade finance platforms.

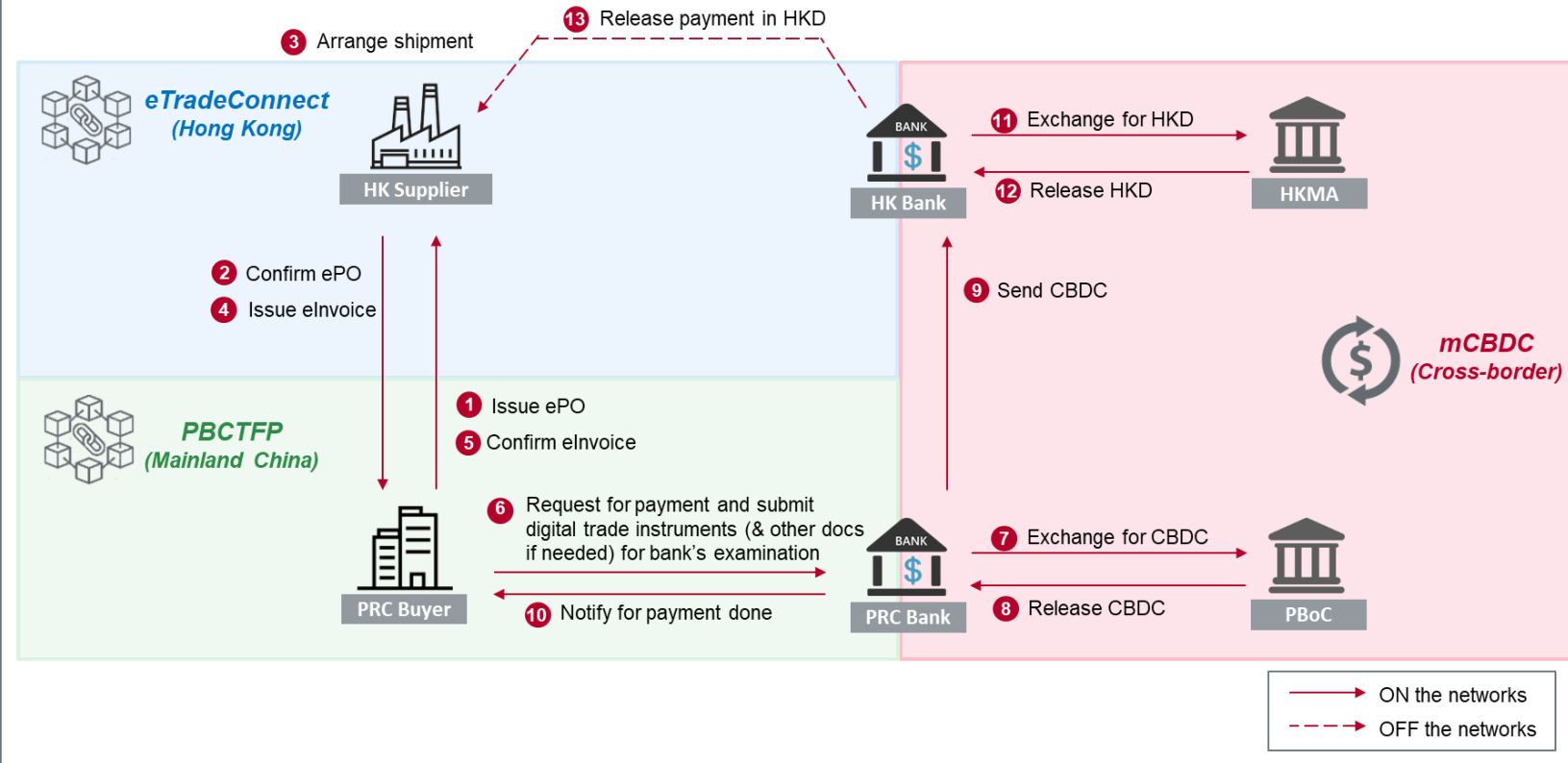
Steps 6 – 9: HK buyer subsequently raises a payment request via eTradeConnect along with digital trade instruments to HK bank. After deducting buyer's bank account, HK bank exchanges for the CBDC from HKMA and directly sends to mainland bank via mBridge without the use of intermediaries' settlement service.

Steps 10 – 11: After received CBDC, mainland bank notifies mainland supplier for the payment received. Supplier submit digital trade instruments via PBCTFP.

Steps 12 – 14: After examined the trade authenticity, mainland bank redeems the CBDC from PBoC for CNY and subsequently releases payment to supplier.

Functional Designs

Scenario 2: Hong Kong exports to mainland China



Steps 1 – 5: Mainland buyer (i.e. importer) and its HK supplier (i.e. exporter) process the ePO and eInvoice on the trade finance platforms.

Steps 6 – 9: Mainland buyer submits the digital trade instruments via PBCTFP and requests for payment. After examined the trade authenticity, mainland bank exchanges for the CBDC from PBoC and directly sends to HK bank via mBridge without the use of intermediaries' settlement service.

Steps 10 – 13: HK bank redeems CBDC from HKMA for HKD and releases payment to supplier after conducting AML screening.

Expected Benefits

Reduce Processing Time

mBridge is an innovative project uplifting cross-border payment process in fund flow. The features of mBridge combines the settlement and payment process at one-stop and provides a faster channel for cross-border fund transferring bypassing all correspondent banks.

Moreover, the network of eTradeConnect and PBCTFP provides an ecosystem to fasten the information exchange, which facilitate the transaction screening process.

Digitalize the Process

The ecosystem of eTradeConnect and PBCTFP facilitates the digitalization of trade documents and reduces manual process of both banks and corporates.

Corporates can create the digital trade instruments together with their counterparties and then submit to banks by a single click. The information can be immediately delivered to banks' back-end system without any manual process.

Enhance Cost Efficiency

The removal of correspondent banks and clearing system can diminish the overall payment costs of banks and corporates.

In addition, with the use of digital trade finance platforms, both banks and corporates can save the administrative cost of handling paperwork. The banks may further reduce the operational cost to incorporate additional measures on trade authenticity examination.

Strengthen Risk Control

The participation of corporates' counterparties in the trade finance blockchain network can assist the bank to mitigate fraud risk and AML risk. With the information verified by counterparties, Banks no longer solely rely on the information submitted by the customers as a single source to prove the authenticity of trade.

Appendix – Platforms' Background

eTradeConnect is the first large-scale cross-bank blockchain project in Hong Kong, managed by the Hong Kong Trade Finance Platform Company Limited, a subsidiary of Hong Kong Interbank Clearing Limited. On this distributed ledger technology (DLT)-based platform, customers and their trading partners can conduct trade and trade financing activities through sharing of information in an effective and cost-efficient way.

People's Bank of China Trade Finance Platform is managed by a subsidiary of the People's Bank of China's Institute of Digital Currency. The platform is a financial infrastructure that provides public services in trade finance. Since launch, the platform has facilitated a number of businesses including multi-level receivable financing in the supply chain, cross-border financing, international trade remittance supervision, and tax reporting on outward payments.