

INSIGHT

## Lessons from Asia's Blockchain Pilot Projects



In a blockchain, each block is "chained" to the previous one in a peer-to-peer data sharing network. *Blockchain technology is making waves in developing countries across Asia.*

### Introduction

Beyond bitcoin payments and remittances, blockchain exists largely in the pilot stage. Governments and banks are collaborating with technology firms to see if it can be used to solve persistent problems like traceability, identification, and trust.

Let's bring some clarity to the hypotheticals. But first, what exactly is blockchain? It's a type of database that takes records and puts them in a block (akin to, say, a sheet in your Excel file).

Each block is then "chained" to the previous block, using a cryptographic signature. This allows blockchains to be used like a ledger, which can be shared and corroborated by anyone with permission.

In short, it's peer-to-peer sharing of data – it does not require a trusted intermediary.

# Insights

Let's look at some ways Asia Pacific countries are using it.

## Georgia - land registry

In 2016, Georgia and a US-incorporated provider piloted a blockchain-based platform for the National Agency of Public Registry to record land titles and integrate them into the existing digital records system.

Georgians can now register land titles and verify the dates of transactions, thereby increasing transparency and accountability. The original agreement was expanded in 2017 to include other government departments.

Technically, there are two parts to the system. A private blockchain, on which the government records data on transactions, and a public blockchain. The information on ownership is publicly available, although the data underlying it are not - in order to protect the owner's privacy.

## Cambodia - payment systems

Last April, the National Bank of Cambodia (NBC) signed an agreement with a Japanese startup to design a new payments system. The testing phase is expected to be launched by the end of this year.

The objective is to design a system for interbank transactions that will offer a secure and cost efficient way to transfer money. This can benefit many in a country where the commercial banking infrastructure is still evolving, but which enjoys solid mobile technology and connectivity.

Unique to this project is the collaborative relationship between the partners. The technology provider will build the infrastructure, and the NBC will contribute to the startup's ongoing technology design.

Globally, many central banks have been exploring the potential of blockchain. The International Monetary Fund has encouraged this activity and urged banks to study its implications.

## Indonesia - sustainable supply chains

During the first half of 2016, a UK company piloted a blockchain project that tracked the provenance of yellowfin and skipjack tuna caught by local fishermen as part of a sustainable supply chain.

This allows proof of compliance at origin, which in can potentially replace the current paper records which are difficult to verify and subject to corruption.

The system is a mix of mobile technology and blockchain. Fishers registered their catches to the blockchain via text message. Additional data are later verified and added by NGOs. Once the information is transmitted through the supply chain, it cannot be altered, and the data are visible through the product's whole journey.

Supply chain transparency for commodities where provenance may impact consumers is moving forward quickly, and using blockchain for this is gaining traction.

## Myanmar - microfinance transactions

BC Finance, the biggest microfinance institution in Myanmar, is working with a Japanese firm to record transactions on blockchain.

The partners hope that this initiative can propel the sector's growth by cutting costs and reducing the administrative complexity of tracking large numbers of small transactions.

It is expected that blockchain technology can be useful in a country like Myanmar, where advanced accounting systems are not yet in place. However, obstacles include frequent power outages and low-quality local circuits.

Finance in general and trade finance in particular, is one of the more active areas for blockchain development. Commercial banks throughout the region are participating in consortiums to come up with blockchain solutions to the very expensive, slow, and opaque trade process.

## Recommendations

Blockchain pilots are making waves in countries in developing countries in Asia for two reasons.

The first reason is that most developing countries don't have legacy systems that need to be replaced. Blockchain can provide the first upgrade of an existing inefficient system, or introduce infrastructure that didn't exist before.

The second reason for the widespread interest stems from the light regulatory infrastructure in many countries. So far, this has been an opportunity, but it also raises some concerns as this technology matures.

International development organizations can play an important role in ensuring that blockchain is implemented in a development-friendly way. We can bring together regulators, best practices, IT experts, and officials to ensure everyone is on the same page.

## Resources

*Shaping Asia's fintech future*

*Trade finance gaps continue despite fintech breakthroughs*

*Trade finance: A catalyst for foreign currency, growth in PNG*

*Financing agriculture value chains in the digital age*

*How can digital finance better serve Asia's poor?*

*Blockchain Technology and Distributed Ledger*

## Related Links

Explainer: *How Blockchain Can Revolutionize Access to Finance*

Explainer: *How RegTech Is Helping Banks Manage Risks*

Insight: *Using Digital Technology to Reach the Unbanked in Southeast Asia*

Explainer: *Understanding How Asian Banks are Dealing with Digital Disruption*

Explainer: *Busting the 10 Myths on Financial Inclusion*



**Alisa DiCaprio**

Regional Cooperation Specialist, Asian Development Bank

Alisa DiCaprio's research explores how to make international trade work better for development. Specific topics include trade finance, digital economy, technology and international trade regulation. Prior to joining the Asian Development Bank, she worked for the United Nations and did a post-doc at New York University.



**Steven Beck**

Advisor (Trade and Supply Chain Finance), Asian Development Bank

Mr. Beck has managed the exponential growth of ADB's Trade Finance Program, and implemented its first supply chain finance business. Prior to joining ADB, he worked for the Canadian Imperial Bank of Commerce and was an advisor to the Canadian Minister of Finance. Mr. Beck played a key role in the start-up of the Black Sea Trade and Development Bank, and was a consultant for USAID in Southern Africa and for a start-up financial institution in Armenia. Mr. Beck is on the Advisory Board of the International Chamber of Commerce Banking Commission, and a member of the WTO Working Group for Trade Finance.

---

Last updated: November 2017