

Emerging technologies are opening up new possibilities



By [Evan-Lee Courie](#)

10 Sep 2019

Emerging technologies such as blockchain, the Internet of Things (IoT), Artificial Intelligence (AI) and cloud computing are transforming trade and supply chain finance capabilities globally.



Onyebuchi Memeh, Head of Trade South Africa & Southern Africa at Standard Chartered Bank (SCB)

“This is opening up new possibilities for more participants, including small and medium enterprises (SMEs), to access trade finance and other banking solutions,” says Onyebuchi Memeh, Head of Trade South Africa & Southern Africa at Standard Chartered Bank (SCB).

We chat with Onyebuchi Memeh to find out more about the possibilities emerging technologies has to offer in the future...

■ ***What is blockchain, or digital ledger technology (DLT), and what are the benefits to the banking industry, as well as the application of DLT beyond banking?***

Blockchain, also called Distributed Ledger Technology (DLT) can be described as a shared digital record of transactions which can be verified by a network of participants. Blockchain enables multiple parties to create and access a secure, yet transparent record of digital transactions without the need for a central coordinating body.

In traditional systems for making cross border payments for example, each transaction is only considered successful

because of the involvement of trusted intermediaries such as the banks. But in a decentralised system such as blockchain, each permitted party in the network gets to see every record created and there is no need to contract the services of middlemen to confirm or reconcile records on the platform.

Further, the records created on blockchain platforms are immutable and encrypted. These records are accessible throughout the day and they are not limited by geographical boundaries. Blockchains are simply faster, cheaper and much more secure than traditional systems. This is the reason why Banks, Corporates and regulators are turning to them.

One of the great things about blockchain is that it can accommodate self-executing contracts commonly referred to as smart contracts. Smart contracts not only allow for rules and penalties to be defined as in traditional contracts, but it also automatically executes these rules to achieve specific outcomes.

DLT lends itself quite easily to addressing challenges inherent in paper intensive traditional supply chain finance and open account transactions. By integrating suppliers, buyers, financiers and other relevant parties on the blockchain, purchase orders and invoices lodged are easily authenticated by the network.

Additionally, due to increased visibility, suppliers can achieve improved access to financing even earlier in the supply chain (pre-shipment financing).

Beyond banking, DLT may be applied in the following areas:

- **Healthcare:** Distributed Ledgers can allow for hospitals and other parties in the healthcare value-chain to share access to their networks without compromising data security and integrity.
- **Energy:** Distributed Ledger technology can facilitate decentralised energy generation schemes by recording generation while enabling participants to buy and sell energy from other participants
- **Real Estate:** Distributed Ledgers can be applied to record, track, and transfer land titles, property deeds, liens etc. and to help ensure documents are accurate and verifiable.
- **Transport:** Distributed Ledgers may be developed to streamline car sales and leasing, car registration and ride-sharing processes through enhanced authentication and location analytics

▣ ***What are the different ways blockchain, IoT, AI and cloud computing and smart contracts can impact trade and supply chain finance?***

Emerging technologies such as blockchain, Application Programming Interface (API), Artificial Intelligence (AI), Internet of Things (IoT) and cloud computing are throwing up new possibilities in business and enabling SMEs to access trade finance and other banking solutions much more easily.

In this era of digital disruption, APIs especially are increasingly more important in driving connectivity with many of these technologies and facilitating collaboration across different sectors.

APIs allow software components to communicate with each other according to some pre-defined rules. We are seeing increasing adoption of these technologies by fintech players collaborating with financial institutions to deliver financial products to end users.

For example, we recently partnered with two of such players, Ant Financial Services (AFS) and GCash to deliver the first blockchain based cross border digital wallet remittance service.

Standard Chartered as anchor bank is providing basic banking services like instant foreign exchange rates and liquidity in the respective locations while AFS and GCash provide end users with the electronic wallet for real time funds transfers between the two licensed wallet service providers.

To do this, AFS and GCash are accessing our core banking and FX capabilities through our API set and together we are offering an integrated and seamless service to end users. The partnership is aimed at ensuring financial inclusion globally by ensuring that low cost financial services are delivered to the unbanked and underbanked.

Fintechs are increasingly active in supply chain finance collaborating with established traditional financial institutions to reach suppliers lower down the supply chain. Blockchain and API based solutions will continue to play a key role in facilitating these partnerships.

■ How has Standard Chartered Bank used IoT to improve credit monitoring to finance small automobile dealers?

Devices with computing capabilities once embedded into everyday objects enable them to send and receive data over the internet. This system of interconnected devices are often referred to as Internet of Things (IOT).

Because IoTs hold and communicate digital information about the physical assets in real-time, we can think of them as having “virtualised” these assets. The smartphones that we use are a kind of IoT. The millions of bicycles that are internet enabled for shared use have built in IoTs. IoTs therefore facilitate the digitisation of information and financial flows, allowing for these to be seamlessly automated with business process flows.

Standard Chartered has successfully leveraged the IoT technology to implement a dealer finance solution for automobile dealers. Because automobiles can be internet enabled with devices that can broadcast their identities and GPS coordinates in real time, we can remotely monitor them and link them to applicable financial flows. This raises our credit monitoring capabilities significantly.

By creating a Geo-Fence (virtual geographic boundary) around the dealer location, payments to the manufacturer are triggered when a vehicle enters the Dealer Geo-Fence (GF) and repayments to the bank is triggered when the vehicle leaves the GF.

■ Could you tell us how AI and data is used to improve risk monitoring, efficiency and to extend finance to more people?

Data Science (DS) and Artificial Intelligence (AI) are two closely related scientific disciplines that facilitate the assimilation of large volumes of data, identification of patterns, predictions, machine learnings and simulation of human behaviour.

To put these in proper perspective, we use data science to translate data to information. As computing power has grown, data science has grown into Machine Learning (ML). And we use ML to make predictions in a scientific way.

On the other hand, AI is a broad field whose scope is continuously evolving. ML is a sub-field of AI in the same way that Natural Language Processing, Robotics etc. are overlapping domains of AI. Put simply, AI is used to simulate human behaviour.

These disciplines can be leveraged by banks to analyse big data and predict client behaviour more accurately leading to improved fraud detection systems and credit risk scoring models. As credit risk departments in financial institutions increasingly gain access to these superior information, systems and models, it gives them comfort to consider extending financing to more businesses and people who would otherwise not meet the required criteria defined in traditional risk models.

■ How has cloud computing made it possible to handle peak performance and business continuity challenges in the banking industry?

The concept of peak performance refers to having the capacity to handle maximum load for a specific duration of time. In the same way that client facing businesses demand highly available systems that deliver consistent performance at peak periods, regulators also demand system stability to avoid negative impact on consumers and markets.

Consideration must also be given to ensuring business continuity and recoverability from stress events. Meeting these demands are not easy and can be quite expensive even for long-standing organisations who have built up their computing capabilities over a long period of time.

Cloud Computing (CC) describes the provision of shared system resources to multiple users on demand and according to individual needs.

The shared system resources can be categorised into Infrastructure (computers, network and storage), Platform (software services used to build applications) and Applications.

Today CC is often available as a public metered utility such that users can buy computing capabilities on the internet with very minimal management efforts. CC therefore offers users (individuals or corporate entities) the option of buying sufficient computing power on demand for a short duration at a reasonable cost.

Essentially you get to buy what you need specifically when you need them. For the banking industry, the benefits are huge. But the CC strategy deployed must be the right one given the competing requirements to comply with existing regulations on data privacy, sovereignty, security and outsourcing.

ABOUT EVAN-LEE COURIE

Group Editor: Retail and Lifestyle

■ Q&A: Mc Mann talks SingularityU SA Online Summit 2020 - 6 Oct 2020

■ #HumanTraffickingAwareness: Do you know your child's exact location? - 15 Sep 2020

■ #WomensMonth: 'Women can own powerful leadership roles' says Charmaine Houvet - 28 Aug 2020

■ #WomensMonth: Karen Nadasen provides insights to how PayU South Africa is empowering women - 28 Aug 2020

■ #WomensMonth: Petunia Ludick, "You are powerful and deserving of every opportunity" - 27 Aug 2020

[View my profile and articles...](#)

For more, visit: <https://www.bizcommunity.com>