Making Blockchain Real for Enterprises: The Importance of Tokenization

Julio Faura | Published on December 19, 2016 at 14:02 GMT

OPINION

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In this CoinDesk 2016 in Review feature, Faura looks back on what he calls a "remarkable" year for blockchain development in the financial industry, and examines the challenges ahead for 2017.

As we wrap up 2016 and reflect back on how blockchain has been present in the agenda of the financial industry as a whole, it seems fair to say that the progress has been remarkable.

I am referring to what blockchain means for enterprise users – and for financial institutions, in particular – which is a lot more about leveraging the underlying technology of cryptocurrencies to make our accounting systems and transaction rails faster, more secure and more efficient, and less about the cryptocurrencies themselves.

And so, nearly every bank has now heard about this technology, and most would have at least a small internal group studying and fiddling with it. By contrast, this was mostly a forbidden topic a couple of years ago.

Well, if 2015 was a year of discovery for banks, 2016 has been a year of experimentation, where we have seen proofs-of-concept all over the place for many kinds of use case – be it payments, trade finance or capital markets. This broad testing has taken place within smaller banking groups, bilaterally or multilaterally within a number of industry consortia.

As such, it looks like blockchain is not a technology looking for a problem anymore, as there seems to be a decent number of applications where it can really make a difference, as the experiments conducted have shown.

Making it real

Following this logic, the challenge for 2017 will be to make all this real.

What does this mean? To start, it involves crossing the chasm from PoC to pilot, to then committing meaningful resources to take it to production. And in order to succeed at this, it is key to recognize and address the challenges derived from the need to integrate blockchain platforms with existing banking systems, which are often overlooked as we all get carried away by the excitement produced by the amazing possibilities that this technology brings to us.

In essence, the key use of blockchains, distributed ledgers and smart contracts in enterprise settings – and within banks in particular – is based on the idea of using cryptographic objects (cryptocurrencies, IoUs or data structures in smart contracts) not as stores of value per se, but as representations of “real” value assets which are kept under custody within a trusted entity, eg: a bank.

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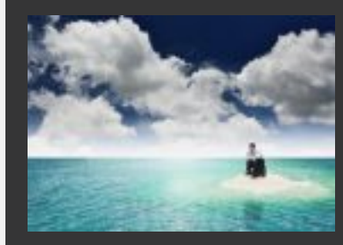
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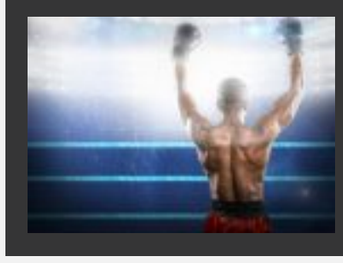
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I realize this may not be the end-game scenario here, since at some point all value assets could be natively issued on distributed ledgers – but hey, we need to start somewhere and move on in an incremental fashion, since money and property are rather serious things and mistakes can have very severe consequences.

This construct is rather interesting for banks in particular, as it effectively opens a new innovation paradigm.

Building connections

Indeed, banks' core banking systems are not well thought out for innovation, and this is more of a requirement than an outcome. Banking is a heavily regulated activity, and the fact that banks are the ultimate source of trust (as they keep our account balances current and safe) forces them to safeguard their ledgers very jealously, so it becomes really difficult to compromise them.

The result is a situation in which banking systems are buried in firewalls, with amazingly cumbersome operational procedures required to make any changes, and with ledger technologies designed for security and scalability at the expense of development agility and innovation.

And, you know what, I am happy they are this way, since it is our money that we are talking about here. But the beauty of distributed ledgers is that, suddenly, they give us a way to transact safely outside of these (very expensive) super-secure but cumbersome core banking systems, and this is not only because of the use of cryptography, but because of their distributed nature.

If only we could make a good connection between bank ledgers and the blockchain distributed ledger, we could then step up our innovation efforts on top of the latter, instead of stubbornly trying to do it on top of our existing core banking systems, which as I have argued are not fit for this purpose.

The key benefit is that, in the cryptographic world, we can innovate in an allegedly more agile fashion, using modern programming technology, and elegantly and safely describing business logic through the use of simple smart contracts, often with just hundreds lines of code.

And this is orders of magnitude cheaper, faster to develop, and much more universally accessible when it comes to collaborative efforts between all kinds of actors.

Tokenizing assets

And so, we argue on the capital importance of what I will call the "tokenization" of assets, which is the process by which an asset (eg: some amount of money) is locked under custody within a bank's system and, as atomically as possible, gets represented in the cryptographic world, be it through a cryptographic token (an "IoU" in the Ripple terminology) or as a data structure in a smart contract.

Conversely, the reverse process can take place by which the user redeems this "token" to recover the value which is sitting within the bank in an omnibus account or custody deposit of some sort.

These two processes do require an integration effort with the bank's core banking system, and it is crucial to show that this effort is not insurmountable – at least not in the same order of magnitude of the one required to develop new things on top of the existing core technology.

Otherwise, it would just defeat the purpose of all this in the first place.

Early indications show that these integrations should be easy to implement, as they only need a few API calls to: 1) detect the tokenization requests coming from the bank systems (eg: a transfer into an omnibus account), and 2) initiate a transfer to the beneficiary when the redemption process is triggered from the distributed ledger.

Of course, the difficulty varies depending on the degree of availability of bank APIs, but at least, in our experience, these integration processes can be achieved in as little as a few weeks.

Work on the horizon

Conversely, blockchain technologies need to be better fit for this purpose as well, which I believe will also be a major topic next year.

Besides the obvious topics of privacy, scalability and performance (including transaction speed and latency) – which are being enthusiastically addressed both by the ethereum communit, the Hyperledger framework and Ripple's Interledger Protocol methodology – there is a particularly important topic about stability and immutability of the distributed ledger.

In the tokenization construct, a synchronization problem in the ledger becomes a true catastrophe, and it is crucial to ensure that forks do not exist or are kept very much under control – indeed, rewriting the recent history of the ledger can produce inconsistencies with the banking ledgers, which could be severe and would be extremely difficult to reconcile.

Going forward, and in order to start "making blockchain real" in the coming year, financial players will do well in collaborating with specialized blockchain startups to jointly solve these issues.

Specifically, work should be done on the issues related to the integrations with the banking system which will require extensive experience in both worlds – blockchain and core banking technology – with the ultimate goal of getting the tech ready to be used in enterprise settings to serve customers at scale.

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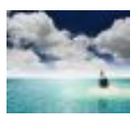

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