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# Why Blockchain Won't Be Connecting Banks in 2017

Gideon Greenspan | Published on December 19, 2016 at 13:01 GMT

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Dr Gideon Greenspan is the founder and CEO of Coin Sciences, the company behind the MultiChain platform for private blockchains.

In this [CoinDesk 2016 in Review](#) special feature, Greenspan discusses why he believes the inability of banks and financial institutions to collaborate will force momentum on new blockchain use cases in 2017.



As the developers of MultiChain, a popular general-purpose blockchain platform, we've gained a fairly broad view of the types of applications that people are building on this new class of database. And we also have a sense of whether those applications are a good fit for blockchains as an architecture, and if so, how soon they are likely to move from proof-of-concept to pilot and production.

For a startup with limited resources, these distinctions are crucial – they ensure that MultiChain's product roadmap is driven by genuine rather than artificial needs.

One glaring example is "[smart contracts](#)", in the sense of on-blockchain general purpose computation performed by every node. Despite the recent setbacks suffered by [ethereum](#), smart contracts are still in high fashion in the blockchain world, not least because developers are

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naturally attracted to any new programming paradigm.

Nonetheless, we’re yet to see smart contracts solving real business problems that can’t be addressed by the simpler and safer technique of embedding data on a blockchain and performing the computations off-chain using that data.

So, smart contracts remain low on our priority list, but what's in their place?

Like many other blockchain platforms, MultiChain was initially designed to enable rapid movements of assets between financial institutions – or to be more precise, the transfer and exchange of the tokens representing those assets (removing the need for separate clearing, settlement and reconciliation).

Indeed, dozens of proofs-of-concept, including many built on MultiChain, have conclusively demonstrated that it is technically possible for blockchains to do this. And yet, despite all the success, we're not yet seeing these systems move to production in interbank networks.

One major reason is that, as a peer-to-peer architecture, blockchains require every participant in a network to see every transaction in order to verify and apply them to their own copy of the ledger.

For the majority of traditional finance networks, the resulting loss of confidentiality is a nonstarter, due both to regulations and the nature of interbank competition.

This explains why finance-focused startups such as Digital Asset and [R3CEV](#) have moved away from using blockchains directly for peer-to-peer settlement. Instead, the blockchain acts solely to notarize transactions and prevent double spends, using encrypted data that is visible only to each transaction’s counterparties (as well as auditors and regulators).

It appears that this situation will remain unchanged until we see a maturation of advanced cryptographic techniques (such as zero-knowledge proofs), which promise to finally solve the three-way dilemma between liquidity, confidentiality and disintermediation.

## Where to turn?

In the meantime, there are other cases in which blockchains can act as a practical means of performing peer-to-peer asset transfer and exchange.

But, to assess this question for a particular case, we need a precise understanding of the level and nature of the trust that exists between the peers who would participate in the chain. On the one hand, there must be sufficient mistrust to rule out the possibility of one participant having full control of the ledger; on the other hand, there must be enough trust for the participants to be willing to reveal their transactions to each other.

To the chagrin of many a blockchain startup, the space of use cases between these two constraints is rather small.

One application that does appear suitable is managing the movement of assets between the subsidiaries of large and complex financial institutions.

In other words, using a blockchain as an internal ledger for multinational banking conglomerates. For me at least, this use case was a real surprise, because the question naturally arises: why not just use a central database in the institution's headquarters?

And the answer I have repeatedly received is this: each subsidiary is a different legal entity, and in many cases under a different regulatory regime.

## Big business role

As a result, a subsidiary cannot be considered as the owner of some assets simply because a database in the parent company says so.

Instead, it has to maintain meaningful ownership of those assets, and this is precisely what a blockchain provides. A blockchain allows each subsidiary to independently prove ownership of its assets in its own copy of a ledger, and to control those assets through one or more private keys.

Nonetheless, the subsidiaries of an umbrella institution are in no way competing, and so can live with the transparency that a blockchain provides.

This all might sound like a bit of a stretch – one of those blockchain use cases which you can only

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make out if you squint hard enough. As the hype-averse CEO of a blockchain company, that was certainly my initial reaction. But by now, I’ve heard about too many internal ledger blockchain projects from too many independent sources to remain skeptical.

As far as I can tell, this is a natural fit.

Putting aside the issue of confidentiality, there's another reason why internal ledgers make sense as an early use case for blockchains: it's far easier to sell, design and deploy a blockchain project in a single financial institution, than it is to persuade several competing institutions to collaborate for their mutual benefit.

In other words, if blockchains are to be used for interbank asset transfers, perhaps when zero-knowledge proofs are sufficiently mature, then internal ledgers could be an important stepping stone along the way.

Banks can begin by deploying blockchains internally to test and prove the technology, and then open their chains up to other institutions once the market and products are ripe.

## Long haul ahead

All this puts a different perspective on the hopes of many for a rapid transformation of the finance sector via digital assets transferred directly over blockchains, or to use the broader term, "distributed ledgers".

Even if we assume that this change is inevitable, startups raising and burning through huge piles of money now will likely fail to build a sustainable business before their investors throw in the towel. So, whichever role you play in the blockchain ecosystem, it would be wise to batten down the hatches and prepare for the very long haul.

Internal blockchains may indeed enter production in the next couple of years, but the broader revolution promised by this technology is far further in the future.

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*[Businessman on island image](#) via Shutterstock*

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