Bridging the divide

How CLS and IBM moved to blockchain

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IBM Institute for Business Value

Advancing blockchain

Financial institutions have positioned themselves at the forefront of blockchain technology. Cost savings alone, some project, could run in the tens of billions of dollars per year.[1] Settlement times could plunge from days to minutes, almost approaching T+0. Moreover, 8 in 10 capital market organizations planning to implement blockchains in 2017 told IBM they expect to introduce new business models for clearing and settlement.[2] As first-movers edge closer to commercial implementation, one vital question looms large: What could stall blockchain momentum?

Don't speculate, innovate

One possibility is the gaping chasm between an agile approach to innovation favored by fintechs and the more cautious, risk-averse approach adopted by regulated financial institutions. Bridging that divide by asking banks and buy-side institutions to become more like fintechs — or vice versa — isn't the answer. Instead, what's required is a fresh approach and new ways of working by both banks and fintechs. For banks, this includes taking on the role of innovator and re-thinking entrenched attitudes toward risk and uncertainty. In this IBM Institute for Business Value Expert Insights report, we share some lessons from a successful, ongoing blockchain initiative between CLS and IBM.

In just a few years, banks have raised billions of dollars to invest in blockchain technology, much of that investment funneled to fintechs.[3] Yet many banks have been reluctant to commit their own people, time or other significant resources to develop blockchain initiatives for their own use. What's holding them back?

Fintechs are well-regarded as innovators; they excel at transformative disruption. Banks and buy-side institutions have cultivated different skills. They are learning to navigate labyrinthine regulations and complex back-office processes. Their reputation is earned on customer trust and the resiliency and security of their systems. Fintechs, like all entrepreneurial organizations, manage and exploit uncertainty. They boldly disrupt niches while banks traditionally favor hedging their bets.

Fintechs have taken square aim at retail payments and lending. More than two-thirds of fintechs valued at more than USD 1 billion are focused on payments and lending, according to a 2016 McKinsey report.[4] Now, fintechs are beginning to advance on the corporate and wholesale side. Both areas are top targets for blockchain-enabled transformation. Blockchains, however, extend — or can extend —well beyond the front-end applications most fintechs have focused on.

For many, the initial blockchain opportunity focuses on back-office operations between market participants; the opportunity to strip out the frictions and redundancies that impede efficiencies and speed. Here, heavily regulated and often manual processes span a network of institutions. Asset transfers are subject to delays and added costs related to the need for validation and security. Trust must be assured and easily audited along end-to-end processes that frequently cross legal jurisdictions.

Fintechs aren't typically back-office experts. That expertise is found in the trenches of banks and buy-side institutions. Beyond investing in fintechs, banks will have to get their own feet wet by intensifying and extending their interactions with fintechs: build ecosystems, and collaborate with fintechs and technology vendors — as well as regulators — to advance blockchain industry-wide.

Take risks to reduce risk

The most difficult change for banks may be adopting a new attitude toward risk that includes the use of innovative practices to address it. That doesn't mean financial service firms need to settle for a blockchain solution that creates greater risk. The very premise — and promise — of blockchains is to decrease risk and increase resiliency, transparency and trust; in other words, to create a "trustless" environment where third-party validation is not a separate activity as it was in the past. This outcome should be a prominent design point, one that is established from the outset and continuously evaluated as blockchain initiatives progress.

However, based on the CLS-IBM collaboration, it seems most banks will need to readjust their approach to risk in terms of go/no-go decisions, especially in the early phases of a project.

CLS is the largest provider of settlement and risk mitigation services for the global foreign exchange market. Our first blockchain project involved the bilateral payment netting of foreign exchange trades in more than 140 currencies for buy-side and sell-side institutions.[5] While the service we were introducing could have been delivered through traditional methods, we decided to develop a blockchain-based solution. Blockchain, we recognized, would simplify the architecture and enable scalability of the underlying solution, as well as provide a strategic network across which additional blockchain services could be delivered. Because we were entering new technology domains, we began consultations with regulators at the outset.

As we've learned, organizations can design their first blockchain initiative to avoid significant risks. At CLS, our first decision was not to build a bridge too far or wide. In other words, our first initiative could not be one where failure put our existing business at risk. Other institutions have learned this too well — launching core business products on untested technology is a high-risk strategy.

Additionally, it's important that blockchain-based solutions leverage the capabilities of the wider organization. At both IBM and CLS, we started by extending an existing process to augment a service, a consideration that reduced risk. This enabled us to deliver a blockchain-based solution that is integrated with an existing ecosystem spanning processes, governance and supporting applications.

Instead of replacing a business process with a new one or reengineering it entirely, we found during one of our first projects, at the IBM Global Financing (IGF) Unit, that adding new functionality to an existing process is a good place to start. At IGF, which extends credit to partners who purchase from IBM suppliers, we began with dispute resolution, which had been a lengthy and labor intensive process. IGF's blockchain for dispute resolution can handle the 2.9 million transactions that lead to an average of 25,000 disputes annually and tie up about USD 100 million in capital. As a result, the time to resolve disputes is expected to drop from more than 40 days to fewer than ten, improving capital efficiency by 40 percent.[6]

IGF chose not to replace its existing systems. Instead, it transferred data from legacy systems to a blockchain that operated in parallel. This eases the challenge of integrating blockchains with existing processes and accelerates the time to move to production.

At CLS, we approached the challenge from a client-centric perspective. We designed a technological interface that didn't require our clients to use blockchain to access the netting service. They have the option to use the new service via their existing SWIFT systems or directly by hosting their own blockchain nodes on our closed and secure network.

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Give your evolution a kickstart

Ultimately, blockchain's greatest breakthrough — the promise of network effects — may also be its greatest challenge. The current state of play, with disparate institutions working ad hoc on specific point solutions, may impede that outcome, or at least slow it down for a time. To be sure, the pace of adoption and consequent transformation have a significant dependency — industry-wide coordination and collaboration across all players in a network, including regulators.

Banks and large buy-side institutions are a patchwork of complex processes, systems and governance, much of which has been established over many decades. Executives that have inherited these artifacts often feel uncomfortable with removing or reinventing them. The fear of the unknown prevails in an industry that is managing ever-greater regulation on top of eroding client trust and profits.

Resistance to change — inside an organization and with potential network partners — can be a drag on initiatives. Add to this the necessity to shift from command and control cultures to decentralized governance, and that resistance to change becomes a significant concern — the fear of loss of control. Current efforts to educate and appease these concerns may not yet be sufficient.

At design thinking workshops, organizations can develop, test and evaluate use-cases, as well as platforms for business networks to collaborate and develop blockchain initiatives together. Blockchain "garages" are an opportunity for banks and fintechs to practice hands-on innovation, access tools and APIs, and accelerate the development of their projects.

Industry sandboxes are yet another means for advancing open innovation and collaboration. In a sandbox, organizations, for example, can simulate the creation and settlement of smart contracts, advancing their concept toward production. They can also include regulators necessary to anticipate the complex maze of cross-jurisdictional legal requirements, experiment with technologies that don't fit into the current regulatory framework and manage risk.[7]

Consortia can seed trust; sandbox environments can sow experience. First movers are necessary to build out infrastructure and interoperable platforms, capturing the benefit of defining the rules for new networks. Some believe that the transformative possibilities of blockchains are so daunting that there is a first mover disadvantage. First movers, they say, bear all the cost and the risk. From our perspective, the risks can be managed effectively. The value is realized not just by the initial solution, but by the new vantage point gained. The best way to see the future is by experiencing it. And the only way to get to that new future is to build a bridge.

About CLS

CLS helps clients navigate the changing FX market-place — reducing risk and creating efficiencies. Our extensive network and deep market intelligence enable CLS specialists to lead the development of standardized solutions to real market problems. Our innovative, forward-looking products make the trading process faster, easier, safer and more cost-effective — empowering our clients' success.

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Notes and sources

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Experts on this topic

Joy Sengupta

Head of Corporate Strategy & Planning, CLS
https://www.linkedin.com/in/joydebsengupta/
jsengupta@cls-services.com

Ram Komarraju

Head of Innovation and Technology Delivery, CLS
https://www.linkedin.com/in/ramko/
RKomarraju@cls-bank.com

Keith Bear

Vice President, Financial Markets, IBM
https://www.linkedin.com/in/keith-bear-2b7407/
keith_bear@uk.ibm.com

IBM