Blockchain for US Settlement: Three, Two, One, Takeoff?

AUGUST 31, 2016 BY CHRIS KENTOURIS — LEAVE A COMMENT

If US blockchain afficionados have their way, the technology underpinning the virtual Bitcoin currency could end up helping the US move from settlement in three days to as quickly as a same-day or even faster — real-time settlement.

Blockchain technology firm itBit is in talks with a cross-section of fund managers, broker-dealers, high-frequency trading firms, exchanges, custodians and settlement banks to form a market advisory firm to run a blockchain trial. "The primary goal of our exploration is to determine if a holistic move to T+0 by incorporating the new technology and efficiencies of blockchain would be feasible and desirable," says Steve Wager, executive vice president of precious metals blockchain product solutions at itBit in New York. "With this group of stakeoholders involved, the firm can make a comprehensive assessment of how various market participants would come together."

"T+0" is industry lingo for same-day settlement– that is settlement on the same day the trade is executed. It could also mean real-time settlement or immediately after the trade was executed. That's a far cry from the current three-day settlement cycle in the US, which is supposed to be reduced to two days in September 2017. Europe already moved to a T+2 settlement period in October 2014. So far, US industry players have balked at moving to a shorter timetable than T+2 on the grounds it would be too disruptive and costprohibitive.

itBit's approach to shortening the US settlement cycle isn't the first time the firm has ventured into the post-trade space. In fact, it is in talks with international securities depository Euroclear to build a new settlement system for the London bullion market. An advisory group has been formed to discuss how the system would track, clear and settle trades in the gold market in close to real time.

Blockchain, formally known as distributed ledger technology (DLT), is a method of recording data — transactions, as well as agreements or contracts that need to be independently recorded and verified as having occurred. The digital records are confirmed as accurate by the participants, then frozen into a "block" which is then bound cryptographically and chronologically into a chain using complex algorithms. Once any block is added to the ledger, it can't be altered or tampered with.

Possible Plan

"In a blockchain ecosystem there is no differentiation between the trade and the actual clearing and settlement of a trade," says Ron Quaranta, chairman of the Wall Street Blockchain Alliance, a New York-based non-profit advocacy and education group. "At a fundamental level, a blockchain transaction cannot be done unless the parties agree and an actual transfer of value occurs. What results is eventually the elimination of counterparty risk."

Creating an advisory group helps itBit gain industry support before it approaches Depository Trust & Clearing Corp (DTCC), the US market infrastructure for clearance and settlement. itBit and DTCC would need to work out just how to incorporate DTCC's subsidiary clearinghouses National Securities Clearing Corp. (NSCC), Fixed Income Clearing Corp. (FICC) as well as depository Depository Trust Company (DTC) into the blockchain equation. Wager wouldn't provide any further details on his firm's blueprint, but blockchain experts predict the arrangement would likely include itBit having some type of account — either a control account or participant account — at DTC. Of the two possibilities, the control account would be easier to implement.

Granted, by ensuring instantaneous trade matching, blockchain technology would theoretically eliminate the need for clearinghouses to exist. However, it is unlikely regulators will accept such a revolutionary change according to a Goldman Sachs issued in May, "Blockchain: Putting Theory into Practice." If clearinghouses were to disappear, so would the benefit of netting which remains central to today's market structure. DTCC has said that by netting trades and payments among market participants, it reduces the value of securities and payments that need to be exchanged by an average of 98 percent.

What's more, regulators wold have concerns about removing the "safety net" of central clearing. "Regulators would want a central body to oversee the trade and minimize default risk. Overall, we believe clearinghouses will likely be an additional oversight of the blockchain driven system as part of the settlement infrastructure and an independent verifications body," says the Goldman Sachs report, which predicts the US could save US$2 billion annually using blockchain technology to settle cash trades. Wager would only say that blockchain technology could also be designed to provide netting — or matching up single buy and single sell orders for each security.

Clearing is just one step to settling the trade. It is the payments process that has market players the most concerned about the workability of blockchain. In order for a trade to be settled in the US, money has to be exchanged for ownership of shares on settlement day. “Currently, blockchain solutions in financial markets struggle with any integration with existing payment rails,” says Quaranta, who also serves as chief operating officer for New York blockchain-based loyalty and rewards platform operator Loyyal. “Until this aspect, the connectivity between actual cash payments and any particular blockchain, is solved these challenges remain.”

Wager says that itBit has come up with an answer on how to integrate with existing payment systems without elaborating on the technical details. In May 2015 itBit was approved by the New York State Department of Financial Services as a limited purpose trust company after it raised US$25 million in is Series A funding. That legal status, say market players, would likely give itBit the ability to connect with the US Fedwire system, which would be necessary for a domestic trade to be settled.

Using blockchain to reduce the US settlement cycle for equities wouldn’t be the first time blockchain has been discussed in the post-trade space, but it would be the most dramatic use. Settling syndicated loans, reducing reconciliations, and processing repurchase agreements are three other uses for blockchain being discussed by operations and technology specialists. The itBit project appears to be the first in the US to tackle equities clearance and settlement. “More illiquid assets are low-hanging fruit from the perspective of blockchain,” says Quaranta. “With much lower processing speeds and throughput requirements, it is relatively easy to structure a blockchain pilot solution that can keep up with the flow of trading and settlement for illiquid assets.”

The DTCC won’t comment specifically on itBit’s initiative. It also claims that its current technological capabilities are perfectly capable of handling an accelerated settlement cycle today. However, many industry players are not so certain about that. DTCC acknowledges that it is investigating several use cases for Blockchain. The DTCC has previously announced it is working with Digital Asset Holdings to evaluate blockchain as a means to establish FICC as the settlement counterparty for repo trades in real-time, “allowing additional netting and offsets.”

Repos, which play a critical role in providing short-term borrowing for dealers, were selected by DTCC as the first candidate for a blockchain trial because of its real-time information sharing capabilities. The first phase of DTCC’s project with Digital Asset will be developing a proof of concept. Future phases will include collaboration and testing with market participants. DTCC has suggested that it would expand the use of blockchain technology to other post-trade functions, but has not offered further information on its plans.

Launched in 2014, Digital Asset is part of a cottage industry of companies building financial applications for blockchain, and the US might not be the first to rely on blockchain for securities settlement. A study just released by the World Federation of Exchanges (WFE) found that about 84 percent of market infrastructure providers are studying distributed ledger technology. Among the 24 financial market infrastructure providers surveyed, one had already used a distributed ledger technology application, some are in the proof of concept phase and another in the very early stages of evaluating the technology. Clearance and settlement were seen as the areas with the biggest potential for distributed ledger development because of anticipated process efficiency and cost savings.

What Else is New

Digital Asset has also signed a deal with the Australian Securities Exchange (ASX) to potentially replace its clearance and settlement platform CHESS with blockchain. When asked to provide details on the project, a spokesman for ASX referred FinOps Report to the ASX's August 18 presentation on fiscal 2016 results which states that ASX has developed a DLT prototype for a "subset of use cases." That prototype met performance, security and scaleability thresholds. The ASX is now working to build an "industrial strength" DLT platform and will decide on whether to replace CHESS in 2018.

Although ASX is considered the the largest exchange to attempt to use blockchain as a full clearing and settlement system, Overstock.com CEO Patrick Byrne's startup exchange TØ claims the first web issue of a security in the form of a crypto-bond over blockchain. TØ was announced in late 2014 and has been open for trading just over a year. However, TØ is starting from scratch and has yet to gain momentum. In May 2015, Nasdaq started investigating blockchain technology for its private market and launched an exchange platform called Linq. Nasdaq then said that Linq was the first of its kind to issue a security over blockchain.

South Africa's central securities depository Strate in July established a unit dedicated to evaluating the potential for blockchain technology. Depository officials say they will meet with fifteen other central securities depositories in Geneva in September to share ideas on alternative clearance and settlement models using blockchain technology. Partnering with San Francisco-based blockchain technology provider chain.com, Strate has already come up with two proofs of concept, one involving settling trades on blockchain and the other proxy voting for an annual meeting.

"We are in a similar position to most markets in terms of being in a research mode," says Tanya Knowles, director of Strate's new 12-member fractal solutions division. "Our goal is to understand just how blockchain technology can be used to clear and settle a trade in a short settlement cycle or even real-time." In July, one of Strate's shareholders, the JSE, moved to a three-day settlement cycle.

Once Strate is able to muster support from local custodian banks, its main shareholders, it will come up with a more intricate working model for clearing and settling a trade using DLT. The proof of concept designed by chain.com used pre-funded accounts. Strate has yet to issue any requests for proposals to blockchain technology providers, but shortlisted a handful, says Knowles.

Given blockchain study and trials now seem to be at the forefront of industry interest, regulators may have no choice but to step up to the plate. South Africa's securities watchdog Financial Services Board has been keeping a close eye on Strate's activities, but made no announcements on how it would regulate or approve of the use of blockchain technology. The UK's Financial Conduct Authority (FCA) is considered the most forward-thinking in offering support to companies with innovative technologies, including blockchain technology through a "regulatory sandbox." Companies can test products with the FCA's authorization. Of the 177 companies assessed by the FCA's Project Innovate about 40 of them have won approval. A "small but significant" number of those are developing blockchain technology, says the FCA.

Wager wouldn't say whether itBit has spoken to the US Securities and Exchange Commission or other regulatory agencies. The SEC has suggested that it should directly oversee firms offering blockchain technologies instead of monitor the use of blockchain technology by financial intermediaries. "One key regulatory issue is whether blockchain applications require registration under existing Commission regulatory regimes, such as for transfer agents and blockchain," says White, chairman of the SEC in late March in a speech entitled "Protection of Investors in an Innovative Marketplace." Subsequently, in its concept release on updating rules for transfer agents, the SEC asked for comment on how blockchain technology would affect shareholder recordkeepers. The regulatory agency wouldn't comment further for this article.

Regardless of whether itBit is successful at bringing the US to a same-day settlement cycle, it has clearly lighted a fire under the conversation into how the US can reduce its settlement cycle beyond a two-day timetable.

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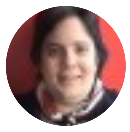

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