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Time for *Another* Reality Check: How Close is the Blockchain Revolution in Capital Markets?



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Blockchain may have yet to fulfil its promise but progress, albeit slowly, is being made in the post trade space since the publication and discussion two years ago of Ascendant Strategy's Insights Paper: 'Time for a reality check – how close is the blockchain revolution in capital markets?'

One of the main differences today is that there are more initiatives and proof of concepts in the market. There are still the unicorn start-ups but also brokerages, custodians, institutional trading platforms and global banks are building a range of digital asset products and services across the capital markets spectrum, according to a new White Paper published by Invesco along with Keith Bear and Michel Rauchs, Fellow and Research Affiliate respectively at Cambridge Judge Business School's Centre for Alternative Finance.

Equally as important, market participants have a more realistic view of the potential of distributed technology ledger (DLT) capabilities. It is no longer seen as revolutionary, ushering in a new age and replacing outdated post trade functions across the board. Instead, it is widely accepted that adopting the technology is an evolutionary process that will bring incremental step changes and improvements to existing market infrastructure within an organisation. In other words, the projects are more geared towards specific areas with high levels of manual processes that can deliver the greatest efficiencies. They are also likely to co-exist and not replace the existing systems. Moving the dial to fixing the problems of the larger market infrastructure providers such as central securities depositories and central counterparties needs widescale collaboration and cooperation, which is never easy in financial services especially on the banking side.

However, if the smaller scale projects and proof of concepts are successful, this is likely to grab market participants' attention and may encourage them to sit productively around a table.

*Lynn Strongin Dodds of The Realization Group goes back to the original participants – **James Maxfield** and **Alastair Rutherford**, Managing Directors at Ascendant Strategy, **Olaf Ransome**, Head of CS at the Swiss Digital Exchange, which is part of SIX Group, **Sophia Grami**, CSO of CrypPro, and **Monica Summerville**, Head of Capital Markets, Celent, a division of the Oliver Wyman Group – for a progress report as to where DLT fits in the post trade ecosystem and what the future will hold.*



Focus switches from large scale infrastructure to company specific internal projects

When DLT first came onto the scene over ten years ago, there was a widespread view which persisted for a long time that it would be a panacea and replace the inner settlement workings of a CSD or CCP. The inefficiencies were well documented but tackling these unwieldy issues in the post trade space requires greater coordination and collaboration between industry participants. This means getting everyone on the same page in terms of governance, funding, operations, standards and regulatory compliance. The process can take years and not weeks. Vested interests typically get in the way and in the meantime solutions, in this case the advantages of DLT, get lost.

The challenges are often underestimated, according to Alastair Rutherford. “The blueprint of how to get off the ground had been kicking around for a while. There is a reason why it has not happened with older technology. It is not fundamentally a technology but a collaboration and change management challenge, whatever the underlying technology actually is. That is just so colossally difficult to orchestrate as well as costly that in my view, unless there is a really big incentive it is unlikely to happen, except in an evolutionary fashion.”



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“The result, he adds is “more of an organic evolution, and all the quirks that come with that. You end up with an ongoing mix of new and old, which further complicates the spaghetti. This means there will be quite contained solutions, probably unlikely to be spanning more than two organisations. This is just easier to coordinate and collaborate. As soon as you get more than two then they can gang up on each other, it becomes more difficult and more expensive. The amount of risk involved in making it happen just starts to increase exponentially with the number of parties involved, hence the slowdown of progress with Fnality (the company developing Utility Settlement Coin).

Another way, according to Sophia Grami, who had previously been with Synswap, “is to implement the technology within one firm, one company, that is international such as HSBC which launched a blockchain for settling FX trades and then you can deploy your solution within the different companies within that group. It is probably the simplest way because the reality is that it is extremely difficult to have this critical mass, and network effect. This is why I think there will be consortium-based utilities because they can deal with this critical mass challenge.”

Complexity of capital markets pose major hurdles

Capital markets in general can be particularly difficult to test drive new technologies because they are so complicated. As James Maxfield says “It is not like fulfilling an order from Amazon. There are all these different permutations in the trade life cycle and the inability to standardise them leads to manual processes and it becomes very difficult to get to the levels of automation and process simplification that, ultimately, the industry does need. There’s a lot of cost opportunity to deliver but it’s not straightforward.”

This is why the focus has become narrower and solutions are more targeted. “The penny has dropped and there is a much more of an appreciation that there is no silver bullet,” says Maxfield. “Some of the hype has lessened and there is a recognition that DLT is an interesting technology and it should be applied to a business problem or a component part of the process, rather than just applying technology for technology’s sake.”



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Against this backdrop, those in the post trade world are not only closely watching developments on their own territory but across the wider financial services landscape. An innovation in one area of the business could kickstart a project in another. The impetus for change though remains the same – to make processes better, faster and cheaper, according to Olaf Ransome. This is why he believes that the Accenture report – Banking on the Blockchain – highlighted in the earlier Insights paper still resonates. The numbers crunched show that the outdated and complex legacy structures cost the industry roughly \$700 billion annually, including the cost of capital, with many existing processes having remained unchallenged for decades.

Maxfield believes that the technology will have the most impact in the thorny areas of data integrity checks and reconciliations that still involve “five different emails or phone calls associated with the effective matching and settlement of a trade.”

Monica Summerville, Head of Capital Markets, Celent also sees opportunities in asset classes that have lower transaction volumes. “This is why we see a lot of activity in the over-the-counter derivatives space and the private markets, because they do not have super-high transaction volumes,” she says. “There is still a lot of paperwork and manual processes, so there are clear benefits that you can gain by everyone being on this single version of the truth.”



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To date, though many of the projects are focused on the FX processing arena. It may not be surprising to start with the more liquid and simpler asset classes before moving onto their harder, illiquid counterparts. Maxfield also believes that regulation is a factor. He says improved settlement creates a more robust business case for adoption, when considered through the lens of intraday liquidity management under BCBS 248 which ensure banks can meet their payment obligations and determine their liquidity position at regular intervals daily.

HSBC launched its blockchain platform for FX trade processing two years ago but two other standouts, according to Maxfield include CLSNet, an automated bilateral payment netting calculation service for more than 120 currencies based on an IBM designed DLT framework. By using standardisation and enabling a greater percentage of FX transactions to settle on a net basis, intraday liquidity is optimised, while there is also greater operational efficiency and increased risk mitigation for non-CLS-settled currencies. The other is a collaboration between Cobalt, the foreign-exchange (FX) and digital asset infrastructure provider and Baton Systems, a post-trade solution for capital markets firms, that have joined forces to provide a seamless end-to-end FX settlement solution.

Libra and regulatory forces drive market participants to take DLT seriously

On the bigger capital markets stage, there is a great deal of activity that is likely to reverberate down to the post trade space. Covid-19 and the ongoing stream of regulations are seen as enablers, accelerating the changes that had been taken place. The eye-catching initiatives are not only emanating from the traditional tech vendors. Social media giants such as Facebook are also causing a stir with Libra, its proposed new digital currency. It did not get off to the best start and was recently rebranded Diem after a backlash from regulators and central banks concerned it could upend financial stability, erode control over monetary policy and threaten privacy. The new moniker reflects a simpler, revamped structure, with a single dollar backed digital coin instead of many, in order to gain regulatory approval.

However, despite the furore, as Summerville points out, Libra not only forced people to sit up and take notice but also governments and central banks to take the technology seriously. Like capital markets, Facebook is a network play", says Summerville. "Clearly, a number of companies got nervous over the reaction of the central banks and the governments. A number of their partners pulled away, and I think that it was clear to Facebook that they had to rethink their approach, but it did create huge awareness and understanding."

She adds that "from my own experience since joining Celent and Oliver Wyman, we have had conversations with central bankers about this. They want to understand it and know what they need to be doing. The Bank for International Settlements also just published a paper looking at what central bankers are thinking about digital currencies."

Ransome also believes that there will be greater emphasis on blockchain in the post Covid world. "There is a widely held belief across the industry that there'll be a big demand for private capital as we come and dig ourselves out of this hole: private markets, private tokens."



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Banks are unlikely to step up to the plate as they did in the past especially for their small and medium sized enterprises. This is due to Basel IV coming into force in 2023 which is a significant step-change from measures introduced by Basel III particularly in relation to the evaluation of risk-weighted assets and introduction of capital floor requirements. The new rules include new limits on the use of internal models, with enhanced standardised models in their place increasing the granularity of risk weights evaluation, which is likely to result in a higher global capital requirement for larger banks.

"This means that banks will have to offload existing business from the balance sheet and need a more permanent solution to not putting assets on the balance sheet in the future," says Ransome. "This can create the possibility to use tokenised assets. Suddenly, rather than just having a blockchain version of the thing you already have, you have the opportunity to create more liquidity, which drives markets."

As a by-product of this move to asset tokenisation, new post trade systems and processes will emerge to support these markets, effectively creating a use case for how the technology can be impactful. "I think that it's unlikely that the current processes get rewritten wholesale all on their own" continues Ransome. "I think if we had newer digital assets like this, and in moving them you see new models of post-trade emerge, that will put the pressure on the other ones to say, "Okay, can we change? Is it worth it?"

The lack of collaboration and cooperation still hinders the building of large scale projects

While collaboration and cooperation will continue to hamper progress on large scale projects, Summerville believes that the two main stumbling blocks in the post trade space are “regulations in Europe which focus on using certain entities that sit in the middle as well as interoperability – not just between blockchains but between the traditional financial market infrastructure and the new blockchain decentralised-based infrastructures.”

The aim for many projects is to have an ecosystem that will enable different blockchains to easily communicate with each other. This can involve, for example, integration with existing systems, initiating transactions on other networks, conducting transactions with other chains, transacting between deployments on the same chain by integrating apps and making it easy to switch one underlying platform for another.

“I think people have to think carefully about how interoperability is going to work, so at what point do you interface to the old technology,” says Summerville. “There are different layers. When people talk about tech stacks or application stacks, at what level do you connect the new and old worlds, and where does that make sense?”

She adds that “it is not just a pure technology question, but also an operations question. In other words, what makes sense for each. If it starts getting very different across a lot of jurisdictions and asset classes, it creates more confusion. That’s not a good thing, so there is a lot to think about.”

As for the regulators, “they are always worried about different kinds of risk: counterparty risk, systemic risk. Where you interface the new and the old worlds, you will have to be very aware of what risks you might be introducing at that point. Regulation is moving forward but it is moving a little slower than people would have liked.”

The nirvana and the reality

“In an ideal world, everyone has the same vision”, says Grami. “The technology would remove all the reconciliation issues in the post-trade world, which are still a problem today, because we don’t have the same view on our data processes, trades or any type of detail for loading the trade. The other part concerns automation where banks trade, send the trades to the ledger and they don’t really need to deal with the post-trade life cycle of that trade.”



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Maxfield believes the industry is at a tipping point. “There are proof of concepts on the market and once you can then validate the proof of value, you can go to the market and demonstrate the benefits to other customers. Their peers on the platform are incentivised to go to others and get them to join the network.”

Ironically, no matter how shiny and new a technology is, it typically follows a tried and tested path of innovation. “As in any normal technology, there is the hype thing and everybody gets all enthusiastic about it, and thinks it going to solve all the problems,” says Rutherford. “Then there are a few interesting things, with some industry involvement, that start up, but it becomes difficult and everybody realises that it is the same old collaboration and change management challenge. However, there are some people who have done some good work and have used the technology for an actual solution to a real problem, that is manageable in terms of implementation. It gains a foothold and starts to be useful. The grand ambitions, though, for a revamp of market infrastructure, funnily enough, do not happen once again.”

Half term report

We were decidedly sceptical two years ago but felt “We are most likely going to benefit from the transformational thinking that DLT has prompted, rather than the technology itself.” That benefit has accrued but additionally we are seeing real problems being addressed by DLT-based solutions, just on a more compartmentalised scale than ‘revolution’.



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