

All about that data

Andrew Kouloumbrides of Xceptor discusses SFTR and how the industry is responding to the growing abundance of data

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What projects has Xceptor been working on recently?

We have 60 active projects at the moment—there is quite a lot of activity going on!

One of the most prominent recently is DerivHack, an event sponsored by Barclays in partnership with International Swaps and Derivatives Association (ISDA), in London and New York. They were looking to see how they could improve the whole process around derivatives documentation and the possibility of using blockchain. A number of teams spent two days working on a pre-packaged bunch of data, the ISDA common domain model and the blockchain of their choice. Interestingly, in London everyone chose R3, one of the companies that we were partnering with. We were the only software provider in the hackathon and our team ended up winning the prize for the most complete solution.

The key thing for us at Xceptor is the end-to-end integration, it needs to be able to integrate into the end-to-end service layer of a post-trade but an ecosystem of different technologies is needed. This is because 'bank A' may use one platform, 'bank B' may use two or three platforms, and 'bank C' may use even more platforms. They all have to co-exist on a common domain model, representation of data, and common blockchain layer. The challenge that has always been inherent in these kinds of initiatives is coming up with a common representation of data and a common service layer that everyone can participate in, but you are relying upon everyone changing their technology to fit in with that and to be able to interoperate with that, and that is always a massive struggle.

Therefore, where our platform is the strongest, is in its ability to transform data, and fit and sit between the different layers of technology and trends and form that data, as well as our applications being able to take a trade from one end of the lifecycle to another. Not only did we have that application end-to-end, we also had our generic

data transformation engine being able to allow others to interact with that service layer.

What are the disadvantages of derivatives trades documentation processes?

The conflict that we see in a lot of our clients is where they are driving automation initiatives. They are trying to automate in the face of increasing regulation and complexity in trade documentation, which is typically caused by the regulation. It has driven more volume and retained the complex paper-based documentation; there is a limit as to what those banks have been able to do around automating that aspect. If you haven't been able to automate anything then it exponentially increases the workload, the operational overhead, and the risk that is inherent in it, so that is a disadvantage for the banks.

Where we come from, we look at how we can deliver that automation in what I would call that completely unstructured world, so you can take this documentation and you can automate the consumption of those contracts in trade documentation, you can automate picking up the data, validating it, comparing the changes that are made by multiple parties who inherently pardon the ecosystem that the banks need to work with. And so if you can automate as much as possible, and with the new technologies that are native to our platform around natural language processing, artificial intelligence (AI), and machine learning, these are far more attuned to be able to process those documents. Then you can actually start to meet the increasing complexity and the regulation but also be able to meet the increasing workload as well.

What opportunities are you seeing for technological innovation in securities finance?

Securities Financing Transaction Regulation (SFTR) is the next big thing coming down the line. Currently, we are in the final stages of negotiating a partnership where we will provide an SFTR data capture transformation reporting service.

With SFTR, 153 fields need to be extracted and nobody has a pure database for those 153 fields to be able to put that into an analytics engine which would derive the necessary reporting. A number of banks that I have spoken to have said that even if they went across their whole organisation, they do not believe that they hold all 153 items of data.

They may be held in some form of documentation, for example, spreadsheets, faxes, PDFs. The ability to extract that data and be able to present it in a way that allows those regulators to connect is what we do.

Every initiative is all around the ability to consume data from multiple different sources in multiple different formats, whether it's structured, semi or unstructured, to be able to actually consume it, repair it, fill in the gaps, transform it and do something with it. This is where the innovation is coming from, particularly in the regulatory space.

How is the industry responding to the abundance of data? Are there any opportunities to be had here?

I think that there are countless opportunities to be had. I read recently that over 50 percent of data coming into financial institution requires intervention. It comes in in a way that you can't fully consume, it is incomplete, incorrect and needs repair. That is significant, if we take client onboarding, which is a massive issue for our clients at the moment, it impacts the ease of doing business and the speed of onboarding clients, as well as client satisfaction.

We have got personal experience of this as we have tried to set up bank accounts in different parts of the world as our business has expanded. It is completely frustrating with incessant form filling and constant requests for information.

But with all of that data, how can firms actually streamline it? You capture it in one place, and you actually have availability of data sources that you can put in and get all of your know your customer, anti-money laundering data automatically fed into that process so that you're not going back to the end client and asking them to provide you with data that has already been provided somewhere else.

As far as we are concerned, data sits at the heart of everything that we do and those 60 projects that we talked about are all data centric, from client onboarding to servicing a trade, to migrating, to looking at evaluation of assets and how you pull that evaluation together whether that is a private equity valuation statement on a website or taking on board fund pricing information coming on an email or a spreadsheet—there is a raft of innovation that is now happening that make it faster, quicker, cheaper, and reduces risk.

Looking to the future, how do you see technology improving the securities finance industry?

There are two schools of thought, the first, which I have heard a number of institutions talk about is: 'We are going to replace the enterprise platform, it doesn't do what we want, it is a legacy system, we are going to rip it out and put a new AI-driven one in.' Typically, around three months later the reality hits where institutions say: "This isn't feasible, there is so much value and intellectual property rights in the data in these legacy platforms, and actually we cannot replace these platforms, so how can we deliver the transformation but in the context of retaining the value of some of the legacy that is there?" We believe that you don't have to retain it all or chuck it all out, you can selectively retain.

Platforms, like Xceptor, drive innovation by being part of the ecosystem of automation technologies. The word ecosystem is frequently used; innovation is currently like a jigsaw puzzle where organisations have lots of jigsaw pieces but with some gaps.

Client onboarding can leave big gaps because when the onboarding data is provided on forms or spreadsheets, someone has manually typed that into a system.

Data Drive

Someone then manually sends an email to another part of the bank because they have to open an account in one area, and somebody else will then send an email to another part of the bank opening an account in another area, and then someone fills in forms to inform the recipient where everything is because there is no overview of what is going on. As a result, you are left with lots of gaps where manual activity or spreadsheets are happening. The innovation is about how to plug those gaps while retaining some of the value of the legacy existing enterprise software. This should be done in a way that allows it all to work seamlessly so that you get the efficiencies of the transformation without having to go through the upheaval of people ripping up lots of existing technology.

Are you seeing people in the industry embrace new technologies or are they choosing to stick with legacy systems?

Most organisations that we deal with will have an innovation/transformation/automation group either centrally or across their major lines of business. I don't think that any of the financial institutions that we deal with have got the luxury of standing still, they are all looking to innovate.

Spreadsheets and manual processing exist because technology couldn't easily or cost-effectively fix the problem but now the new set of technologies can. AI and natural language processing are starting to address those hard problems that nobody has been able to fix before.

Interestingly at Sibos this year, presentations on AI or blockchain tended to attract large crowds. Those two themes are the technological innovations that organisations are seeing as being the game changer in allowing them to transform. From our point of view that is great. I talked about the DerivHack around blockchain distributed ledger, which will bring the industry together and make it far more efficient in terms of how it interacts. AI is a major transformation that is an

inherent part of our platform, which allows us to play our part and consume any data in any format. Fraudulent payments, for example, is an area of where machine learning is being used.

All of the faster payments for the banks come through our platform, and we do the floor checking for them. For example, "this payment is on an account and we have been notified that it has been compromised or the debit card has been stolen."

Fraud comes up quite a lot in terms of interesting rules around trends of transactions, regarding mostly how fraud is detected these days. Dynamic rules, the provisioning of those rules but also the monitoring of some trends around payments history and being able to dynamically analyse payments against trends is really key. We are using AI modules to be able to track and analyse trends and look at slight variations but that are very noticeable in terms of fraudulent activity.

Another area that is becoming prevalent is reconciliation, people should be aware that the financial industry is most probably solely focused on reconciling between parties, transactions, and end of day/start of day, and so on. We have been working with the banks to look at all of the breaks of reconciliation to determine and understand why the break is happening and how we would repair that break, and whether or not we can auto-repair it. If we know what the analysis of it is, as we are also feeding into the front end of that reconciliation, the solution can self-learn so we can undertake some data normalisation and transform it before the data goes into the reconciliation itself.

It is about learning from the break and then auto adjusting the transformed data going into the reconciliation.

This is really interesting because there are a lot of processes that have significant financial impact, which aren't agreed between two parties, and being able to prepare that and auto correct that is key. [SLT](#)



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