

## TRADING PLACES

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Exchanges are places where expectations are traded. And for some time now there have been high expectations around the potential of the distributed ledger technology (DLT). These expectations have

persisted for such a long time that some have cast doubts over whether hopes were too high, and current crypto-asset valuations are not exactly signalling a Westward Ho! to the shores of a promised, tokenised land. However, exchanges themselves may build a substantial use case for blockchain technology. We asked **Dr. Alpay Soytürk**, **Chief Regulatory Officer at Spectrum Markets**, where market infrastructures will be in five years' time, on a scale between 'all unchanged' and 'maximum disruption', and what factors will determine the future of exchanges.

# Alpay, in the real estate market, people say that location is key. Is it fair to say that in the crypto space, it's all about a project's use case? And were hopes too high regarding blockchain's potential?

First of all, 'blockchain' should not be used synonymously with DLT as the blockchain is just a type of DLT. But a clear 'yes' to the first part of the question. This implies that there cannot be a generally valid answer to the second part: every gold-rush during the nascent years of a new technology is followed by a period of disenchantment when it becomes evident that the technology's widespread use is not unfolding at the pace the ballyhoo around its discovery suggested. The comparison with the dot.com-era may have become a cliché but it's valid. As with every great technology, there are some use cases that don't materialise at all, some become effective later than expected and some do in other shapes than they were originally expected to. This is a multi-dependency development, the determinants of which being vertical process steps within a value chain, technical progress of parallel industries and, very importantly with a view to the securities industry, legal aspects, too.

## DLT has been around for almost 15 years now. How long can external circumstances continue to be blamed for DLT's slow uptake?

Between Lenoir's Hippomobile<sup>1</sup>, which is regarded as the first combustion engine driven car, and the first mass production of a gasoline engine automobile by Henry Ford<sup>2</sup> there was a period of about half a century. The internet is said to have been born in January 1983<sup>3</sup> but it was not until the introduction of Windows 95 that people started offering and using online information and services on a significant basis – let alone the development from dial-up connections to broadband.

The relevant supply and the corresponding demand a new technology meets or is able to spark defines its use cases.

In terms of the DLT, these may include digital currencies, the payments sector and many more. However, the only potential use cases I can comment on are related to capital market infrastructures. Here, the question is not if they'll ever come into being, but when this will be, as their inherent efficiency gains are simply too significant to be ignored. This applies to the entirety of processes across the transaction lifecycle and, though with varying potentials, to all asset classes or products. The chain of necessary sub-processes and messages sent back and forth between various entities' systems in the course of a transaction is long and complex, making the overall process slow, prone to error, exposed to unnecessary risk and, finally, costly.

#### If you refer to post-trading processes, the revolution held off...

Because, as discussed, a number of factors must combine to get the ball rolling. In this case, this is not limited to the progression of the underlying technology. It is a challenge much more related to the size and interconnectedness of post-trade infrastructures, a lack of DLT standardisation or the existing trading process design as a whole.

### Can you please explain what you mean by DLT standardisation and the existing trading process design?

While often figured as a single common standard, DLT is not just a mix of technologies like the use of consensus algorithms, cryptography and so-on. There are also multiple design concepts. There is not just one protocol or several that would be different in taxonomy but use case agnostic and where, via industry agreement or regulatory requirement, a norm such as ISO 20022<sup>4</sup> would provide remedy.

In fact, many firms experiment with DLT, with each of them probably looking into how their product or services universe can be most suitably established on decentralised ledgers. At first sight, it may appear comparably easy to replicate a single bilateral trade – as one would think that this is about switching from one semi-automated process to a more, but not fully automated process replacing many of the steps that were relevant before. However, inducing entries on a ledger is what the 12-seconds-flight of Wilbur and Orville Wright<sup>5</sup> was compared to today's commercial passenger traffic. There are a number of design concept related decisions to take which will have multiple implications for the capability of the new DLT process to ever become a standard.

Thinking of finance transactions, the first thing that comes to mind are concerns regarding the privacy of personal and business data. It goes without saying that public, fully distributed ledgers and the validation processes they offer are not an alternative for the exchange of data between parties to a transaction. So, they may use a type of synchronised bilateral ledger, and that may prove to be a fantastic solution to bilaterally settled trades of whatever kind where the two parties share one set of a real-time data on a shared ledger. The efficiency potential is already significant here as resource redundancies and risks decrease and the immediacy of the process relieves liquidity, too.

However, once you add more dimensions to the scenario, things become much more complicated. The emergence of the technology led to the idea that DLT will make double-bookings, confirmation and execution messages and many other processes obsolete once and for all – including regulatory reporting obligations such as those under EMIR<sup>6</sup>, MiFIR<sup>7</sup>, the SFTR<sup>8</sup>, the capital and liquidity reporting under the CRR<sup>9</sup> or publication arrangements under MIFID II<sup>10</sup>.

If you consider the dual-side reporting obligation under EMIR, for example, the use of DLT promises significant room for progress at the end of the trade repositories. Then again, if the data quality of the reports submitted was bad until now, it won't necessarily improve: the consistency of data may rise to up to 100% while its accuracy might not. That is, where a firm submits an erroneous report today, this may trigger a pairing breach. Or, if certain key data is uniquely used by both reporting parties, the trade will be paired but may not match as transaction information is reported inconsistently.

Now, there is a reason firms report erroneously and that is not because they do it deliberately. In most cases, either the reporting obligation, i.e., what the specific data field should contain and when, has not been fully understood, or relevant upstream systems don't deliver this information properly, or a combination of both. Hence, for DLT to render meaningful support at the rear of processes – where it is alleged to prove most disrupting – front end processes must change first.

We could also look into more straightforward transaction types such as cash equities and non-reporting processes such as clearing and settlement, but we'd hardly end up with much different findings – unless there is a response to how a ledger should handle netting processes or asset servicing information such as dividend payments etc.

#### You don't see the businesses of CCPs and CSDs as logical areas of application for DLT?

I do. However, I would like to emphasize the importance of an understanding for how existing processes can be changed realistically against the background of what I had mentioned regarding existing or to-be-released demand. Neither will operators of post-trade infrastructures develop solutions that will make themselves redundant, nor will the industry easily agree on a common standard, let alone be able to develop it on their own in the first place. Plus, I don't believe that there is one fintech able to capture the entirety of process requirements across asset classes, instruments and services and to then derive a solution replacing the existing clearing and settlement operations. Even if there were any such successful attempt, it would probably be doomed to failure in the face of the relevant legal hurdles. It is much more likely that DLT will start to replace legacy infrastructures and processes on smaller scales. Different types of ledgers with different types of access levels, validation processes and flexibility will emerge before a standard develops based on best practices, accompanying technology progress and regulation. And it is likely that smaller but self-contained ecosystems will emerge and pioneer the development of DLT in finance.

#### Why do you think that will be?

As we can tell from our own experience at Spectrum Markets, entering into a changing industry from greenfield operations is always easier than undergoing change based on legacy IT and processes. But there is more than just the process flexibility facet to it as technology-based endeavours need to be financed as well which, in turn, is relevant for scale considerations.

In that context, regulation will have a huge impact as the relevant legal environment is a very sensitive point to consider with a view to data privacy and resilience, transfer of ownership, valuations and other aspects inherent to finance transactions.

### How about trading venues, what are the perspectives in association with the use of DLT?

Essentially, the use of DLT allows the integration of the complete lifecycle of a tradeable security, starting with its listing, including its trading on a secondary market and including post-trade operations and custody. The design of the early ecosystems will obviously depend on what is sensible given the set-up of a given infrastructure. That is, as mentioned, highly interconnected platforms will struggle to quickly embrace the benefits of DLT, this challenge growing exponentially with their systemic importance. On the contrary, new, regulated platforms will probably be suited to issue security tokens, facilitate their trading and arrange for their settlement including transfer of ownership, where the clientele is not involved in heavy, mass-volumes trading.

However, what we're currently associating with niches has the potential to sustainably change the trading venue landscape. Today, an IPO marks the final phase of a company's capital market maturity process. Accordingly, it involves a lot of resources and intermediaries for a company to get there and, vice versa, this is not a route to follow for SMEs. Even the relevant junior market segments of the major exchanges are either too high a barrier for many of them or investors do not really take enough notice.

Once this segment of firms can access capital market funding via the listing of tokenised shares in a fully regulated environment with full transparency and much lower costs due to DLT, and once they start using it on a broader scale, this will inevitably have spill-over effects on larger exchanges in that DLT would be marching in there, too.

If anything, the governance approach European lawmakers took by introducing MiCA<sup>11</sup> and the DLT pilot regime<sup>12</sup> shows the scales upon which we will most likely be seeing DLT unfold its potential.

By the way, this is not the only DLT use case in relation to trading venues. Securitised derivatives, such as those traded on Spectrum Markets, could be issued outside a classic CSD, too...

#### Thank you very much!

<sup>5</sup> The Wright brothers were American aviation pioneers who made the first controlled, sustained flight of a powered, heavier-than-air aircraft on December 17, 1903

<sup>6</sup> Regulation (EU) No 648/2012, the European Market Infrastructure Regulation

<sup>7</sup> Regulation (EU) No 600/2014, the Markets in Financial Instruments Regulation

<sup>8</sup> Regulation (EU) No 2015/2365, the Securities Financing Transactions Regulation

<sup>9</sup> Regulation (EU) No 575/2013, the Capital Requirements Regulation

<sup>10</sup> Directive 2014/65/EU, the Markets in Financial Instruments Directive

<sup>11</sup> The Markets in Crypto Assets Regulation

<sup>12</sup> Pilot regime for market infrastructures based on distributed ledger technology

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<sup>&</sup>lt;sup>1</sup> Étienne Lenoir (January 12, 1822 – August 4, 1900) – was a Belgian engineer who developed the first internal combustion engine in the 19th century. The inventor drove nine kilometres from Paris to Joinville-le-Pont and back in his "Hippomobile", powered by a gas engine and turpentine-based fuel

<sup>&</sup>lt;sup>2</sup> Ford's 'Model T' was the world's first mass-produced automobile (1908-1927)

<sup>&</sup>lt;sup>3</sup> The communications protocol 'Transfer Control Protocol/Internetwork Protocol (TCP/IP)' was established on 1.1.1983

<sup>&</sup>lt;sup>4</sup> Single standardisation approach (methodology, process, repository) to be used by all financial standards initiatives developed by the International Organization for Standardization