ISITC EUROPE

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What ever happened to Blockchain?

-WEBINAR REPORT June 2020-

Introduction

This report is based on the ISITC EUROPE CIC webinar entitled "Whatever happened to Blockchain or is it happening?" The webinar was kindly hosted by the CISI and moderated by senior industry professional, published author, speaker and industry commentator Gary Wright, Director, ISITC EUROPE CIC. The speakers were Dr Maria G. Vigliotti, author of 'The Executive Guide to Blockchain' and member of the Blockchain committee of the International Standards Organisation and Benjamin Duve, Head of Custody and Direct Market Access & Director, Commerzbank AG.

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What is Blockchain?

Blockchain is a type of distributed ledger for maintaining a permanent and tamper-proof record of transactional data. A Blockchain functions as a decentralized database that is managed by computers belonging to a peer-to-peer (P2P) network. Each of the computers in the distributed network maintains a copy of the ledger to prevent a single point of failure (SPOF) and all copies are updated and validated simultaneously. The Blockchain ledger helps to provide transparency for transactions. Although many Bitcoin (a Crypto Currency) transactions are in some ways anonymous, the Blockchain ledger can link individuals and companies to Bitcoin purchases and ownership by allowing individual parties, called miners, to process payments and verify transactions. Rather than a central company presiding over the use of Bitcoin, these Blockchain originators serve central roles in the management and administration.

Crypto Currency and Crypto Assets

One of the original ideas for the use of Blockchain and Bitcoin was to create an alternative payment system, to the banking system. Specifically aimed at micro payments, as transferring small amounts of money outside of UK/Europe was too expensive and took too long. And whilst there has been growth, only about 11% is being utilized for payments, most Crypto Currency is being retained for investment purposes.

If we review what has changed over the last 5 years. Today, in the open market there are more than five thousand [1]Crypto Assets, which have a market value of about 256Bn USD, with Bitcoin remaining the most capitalized and dominant token. Although, still quite small in value when compared to traditional Stock Exchanges, one should appreciate that this has mainly been created through grass root movements, without big bank participation. But there are a few barriers, which have limited growth of Blockchain technology, even for micro payments, including regulatory compliance, scalability, exchange rate volatility, and user acceptance. In addition, there are now cheap and easy alternative payment methods offered by mobile operators competing with Bitcoin. Nonetheless, there has been some progress as several new Crypto Assets and platforms have been created, some of these peer-to-peer payment systems are being used, where the traditional banking systems are not well defined. New developments have included the creation of Stable Coins that are regulated to a degree.

[2]Ethereum has facilitated the creation of tokens, which are basically new Crypto Currencies/Assets, and this has allowed people to effectively issue their own money. This is what has driven the growth that we see today in Crypto Assets. There is huge interest by Financial Services Organisations in Tokenization and Crypto Assets. Tokens have the potential to provide liquidity for illiquid assets.

International Regulation

Crypto assets are gaining in interest from institutional investors and this augers well for future developments that are DLT based. However, the biggest barrier to the growth of this type of new instrument is the lack of uniform international regulations. Governing bodies and authorities must level up to acquire the necessary comprehension and impose relevant regulations, to avoid incidences of mayhem because of fraud, such as previously occurred with some [3]Initial Coin Offerings (ICOs).

While, there is now some regulation in Germany and Italy, allowing Banks to hold Crypto Assets, providing more credibility for those looking to invest. There is an urgent need for international regulatory standards to be specified and agreed, to include all countries that are looking to trade in Crypto Assets. Agreements in the international markets will expand the use of Crypto currencies possibly into mainstream. Central Banks will be a key driver if this were to happen.

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1 meaning something which can be bought or sold in the open market such as Crypto currencies or tokens

2 Ethereum is a distributed public Blockchain network that focuses on running the programming code of any decentralized application

3 ICOs act to raise funds, where a company looking to raise money to create a new coin, app, or service launches an ICO. Interested investors can buy into the offering and receive a new Crypto Currency token issued by the company. This token may have some utility in using the product or service the company is offering, or it may just represent a stake in the company or project.

Will Central Banks use DLT technology? Would issuing digital currencies change Central Banks and their role, so they are potentially competing with Retail Banks? Central banks issuing Crypto currencies would force massive changes in the existing banking industry.

Distributed Ledger Technology (DLT)

Whilst Bitcoin and all the other Cryptocurrencies on Blockchain have risen to the fore. It is the underlying DLT that really holds the potential to change, financial market structures, processing, client services, security, and control.

What can we learn from the use of DLT for Crypto Currencies and how they are impacting the financial markets and society? Can we create new long-lasting game changing solutions?

DLT and its potential benefits

There is no doubt that the creation of DLT and relevant technologies has brought forth many multiple levels of opportunity for future innovations in the financial markets. Based on its consensus-based and trustless nature, we have seen the seen the evolvement of first generation Bitcoin and its underlying payment system via an elegant DLT structure to second generation DLT involving; dApps, Smart-Contracts and the ability to allow “Tokenisation” for innovative ideas and new business creation.

It is quite remarkable that we now have a technology, which for the first time in the history, allows anyone (including machines) the capability to build a "corporation" or business model on the network in a decentralised fashion, without having to domicile in a specific physical location. Operating in this way as an independent entity on the Blockchain, offers an immediate advantage in contrast to the lengthy process of having to set up a business in the conventional way.

Has it lived up to the hype?

Most Blockchain projects are still mostly “hype” because of development immaturity. Most businesses view and evaluate the suitability of Blockchain as a pre-cursor to adopting this technology, unfortunately the opinion and perception of DLT has been somewhat let down, due to the lack of understanding and the conception of unfruitful or controversial projects.

It should be stated that not all business problems need a DLT solution and the bottleneck in adopting Blockchain in a common business environment is largely caused by:

a) They do not think it is fit for purpose or completely irrelevant to their business.
b) They do not see the underlying value that can revolutionise their business.
c) They do not have the capacity and capability to develop and execute it.

The finance and banking sectors have tended to be cynical about the use of Blockchain, although it has the potential to create value within the financial arena. There have however, been a small number of internal implementations in Financial Services Organisations. Little reward for the massive investment in Blockchain DLT technology, over the last 5/6 years one might say. Although, this investment could pay off in the future as use cases increase and knowledge of how to implement and collaborations manifest. Listed below are some of the DLT use cases that FST Network and the panel believes could bring huge benefits.

Some DLT Use Cases

Proxy Voting

One of the use cases that has been identified is for Proxy Voting, where the dissemination of information, its relevancy and reliability often depends on how complete the corresponding secretarial efforts are and the approach the company is taking for the dissemination of the data. The information received by financial services organisations tends to be inaccurate and incomplete and is therefore gathered from many different sources, in many different formats, often unstructured. As a result, data validation and cleansing prolong the process. Most existing solutions still fail to resolve the human process element, necessary to manage the underlying data process issues. With a careful combination of DLT and data management processing, these painstaking issues can be cost effectively overcome and efficiently resolved.

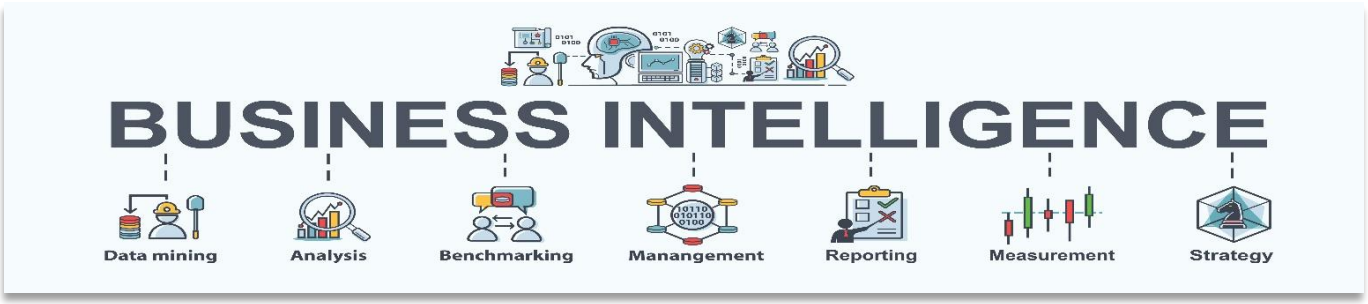
Legacy Data Management

The problem and cost of data siloed in legacy systems in Financial Services is well known, but the need for more efficient ways to manage; instant data referencing, event sourcing, data cross-matching; as well assuring accuracy, consistency, and security is increasing exponentially, with new regulations and customer servicing requirements. The business and technology case are becoming almost inevitable and overwhelming in their need for a solution. As the data system becomes more complex and cross-domain led, new technologies need to be applied. So, how do financial organisations move towards a more seamless solution, while not intrusively making drastic alterations or introducing new systems that will take time to adapt and integrate, however advanced the proposed solutions may seem.

FST Network believes that incorporating a versatile DLT structure as well as carefully utilising Blockchain technology may be the answer to this. It could provide an effective mechanism for structuring, governing, and describing information across organisational and technological boundaries in a decentralised manner that could simultaneously improve accuracy, promote clarity, and enable business insight for improved decision making. A decentralised [4]Enterprise information management (EIM): could provide the following:

1) **For Cross Domains / Cross Systems Management**: *A single identity reconfiguration unit for identity management that allows efficient and unified ID profiling and reuse, cross-matching, record pulling and referencing purposes.*
2) **For Dynamic Access Control Management:** *Flexible access control settings, for selective access granting, data-sharing control, data gatekeeping and data lineage solution.*
3) **For Governance and Compliance Management:** *A unified data and logic governance rule engine for enforcing relevant compliance rules (GDPR, Data Privacy, and Protection) with the audit trail capability.*

These basic ingredients would allow organisations to re-vamp the company's data management process and avoid unnecessary losses or risks due to the incompleteness of solution or unforeseen / unpredictable future events in which exiting solutions are not capable of coping or quick enough to adapt and react.



Many big firms have suffered huge fines because they have been unable to provide a full-proof compliance solution, or have not responded in time due to failure to reconcile, or due to the inadequacy of their existing system to cope with new regulatory demands. Such compliance issues will continue to rise, with increasing complexity especially when advanced technologies such as 5G or IoT rise above the horizon, taking the data influx to a new hike.

[4] An integrative discipline for structuring, describing and governing information assets across organizational and technological boundaries to improve efficiency, promote transparency and enable business insight

By efficiently combining DLT with EIM as well as harnessing Blockchain's main characteristics, this new approach could effectively enhance the conventional "event sourcing" technique to record the relevant "happenings" in the manner of ("who" is allowed to access "what"), via the allowed data format. The sharing of this processed information can also be selectively decided for those intended parties, in a secure manner with complete historical tracking.

One can also view this as a "virtual data-rail" constructed between the multiple reacting parties for efficient sharing of information and data exchange. Via this data-rail, multiple entities, or parties (whether from the same or different organisation) can come together to collaborate, utilise and manage the access control and data sharing in a totally secured and compliant manner.

The metadata can be constructed and re-configured within the company's existing data processing and filtering system in a non-intrusive manner, helping enterprises to tackle most existing data management related issues.

This decentralised EIM could tackle the data management issue, whilst simultaneously handling, data compliance and integrity, which an "on-going" hassle in many organisations. It also can be deployed swiftly to help the company to save huge costs in data management and maintenance, while remaining compliant to data protection and privacy regulations.

Smart Contracts

Aside from Crypto Currencies and small internal implementations, the industry's focus has been on the use of Smart Contracts.

What are Smart Contracts? They are agreements between two peers, stored in a distributed ledger. Like any other Blockchain-based record, no-one can change or cancel smart contracts. No central authority controls them. Smart Contracts execute automatically. All the transactions within your smart contract are processed by the Blockchain.

The notion of Smart Contracts was to be globally accessible and potentially capable of being utilised by approved parties (as they saw fit) to develop a better and greater idea. If this original notion can be pursued, then it will be a game changer. As it will ultimately be a driver to achieve an unprecedented level of institutional collaboration via a global peer-to-peer trustless system.

However, there are still elements of a Smart Contract that make financial institutions nervous, due to the lack of regulation, from which they currently derive comfort when transacting through existing market infrastructures. Namely, the surety that the transaction against payment will be made simultaneously and is backed by a central bank, so the risk is minimal.

Standardisation

An industry initiative for proper DLT standardisation is still lacking, particularly in connection to data compliance issues. Having one would be a crucial milestone for the DLT industry and would really help it to progress. Given the increasing number of players and various emerging Blockchain networks, each promoting their own technology, there are simply too many choices with no proper way to evaluate whether or not these networks (and their techniques) are suitable and sustainable for future usage and development continuation.

Hence, it is vital to have either; industrial-scale standardisation for future DLT development (suitable for all vendors to adopt regardless of their use cases and business models), or to allow some form of connectivity or integration of different Blockchain models, via the route of the interoperability provisioning.

Having good standardisation and interoperability could help enterprises to collaborate on application development, validate proofs of concept, and share Blockchain solutions, as well as making it easier to integrate with existing systems.

Interoperability would allow “transferability” from one network to the next. To enable various Crypto Currencies to transact through different data management systems, is crucial for the successful survival and evolution of this technology. Transferability would help to drive collaborations amongst institutions, industries, and corporates to define and devise new waves of business development and extendibility. This is also applicable for the rise of other emerging technologies such as AI, IoT and 5G ultra-high-speed communication protocols, which also offer the potential combination and integration with DLT used as the underlying tool for future data engineering.

What next?

From a technology basis there are many use cases in Financial Markets, but to develop a Blockchain structure to compare with any existing market, the question of scalability needs to be answered. A game changing solution might appear, through a niche implementation, then with success, growth would materialise and attract users, but the ability to scale up quickly would be required for the chance to compete with existing financial market capabilities.

The financial markets suffer historically from legacy systems and data silos that impair the efficiency of operations, regulatory reporting, and client services. No technical solution in the past has been able to overcome the strategic need for open access to all this data in a secure technical environment. In fact, security and openness appear conflicting. DLT holds the promise of a potential solution, but no market wide introduction has been made to strategically provide a comprehensive resolution.

However, we may finally, be moving forward with new ideas for DLT utilisation and application, especially in the data and intelligence domains. Blockchain is no longer a stand-alone technology and can provide a strong impact on many sectors including the reg-tech framework. The chance of new and novel developments is quite exciting as DLT literally opens realms of possibilities. One might even say that the possibilities are infinite!

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FST Network is a data software engineering company, providing versatile infrastructure solutions for data management, data privacy protection, integrity, and reconciliation. To enable quality data production and automation in terms of observable structure, traceability, better data clarity and smoother data flow.

Authored/Edited by: Jack Chu, Sean Chen, Darren Goh, Leo Cho, David Kuang, Vince Ming, Gary Wright and Cathy Wright