



FISER CONSULTING
FINANCIAL SERVICES

Blockchain

The biggest financial innovation
of this era?



The adoption of the Blockchain in Financial Services: Hate it or love it?

The Blockchain concept has made a striking introduction in the Financial Service industry. Whereas forerunner Bitcoin was seen as a potential disrupting threat, Blockchain is perceived as a game-changer for the future of making financial transactions.

Big financial players believe that the evolved crypto-currency will have a profound and continuous effect on the financial industry. Multinational corporations such as JPMorgan Chase & Co. have spent over \$9 billion on the innovating 'crypto-chain'. ASX chief executive Elmer Funke Kupper speaks highly of the technology as 'something that changes just everything'.¹

With the introduction of the Blockchain one could say that we are witnessing the beginning of a 'finance-democratisation' era. We are starting to live in a time where financial businesses and their counterparties could be substituted by a transparent, open and safer system of doing online business: will the new Blockchain technology become the biggest financial innovation of this era?

The tech game-changer that's got everyone talking

It all started in 2008 with the introduction of the mysterious Bitcoin currency as 'a purely peer-to-peer version of electronic cash' that 'would allow online payments to be sent directly from one party to another without going through a financial institution'.² At first, the new form of digital money did not attract a lot of attention. However, in the present day financial institutions stopped avoiding the crypto-currency as they became taken with the alternative: the Blockchain. Within the

past year many financial-leading institutions - from Royal Bank of Scotland (RBS) to Deutsche Bank - have all revealed plans to explore the new technology. Despite the fact that it is something different and risky, many argue that the crypto-chain could have value for traditional Financial Services.

Define 'Blockchain'?

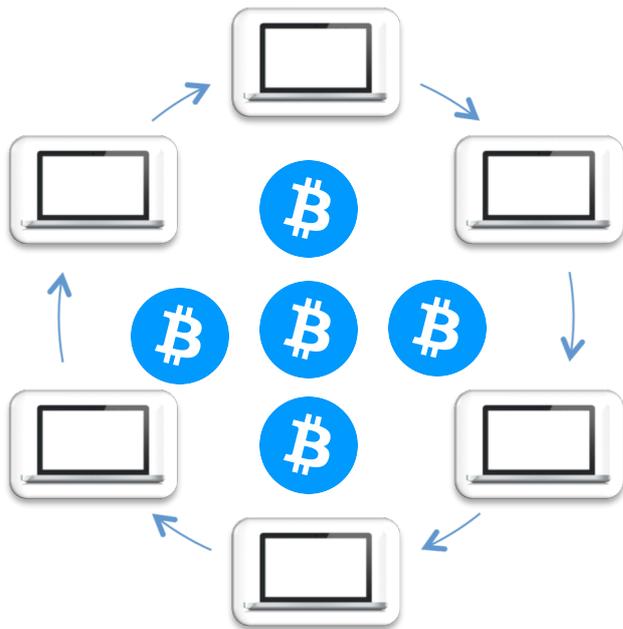
The growing pace of the Blockchain technology is relatively new to the Financial Services sector. To put the Blockchain into perspective, an understanding of the currency is a must.

Blockchain's architecture can be compared to a 'recording database' - it's a sub-type of a centralised ledger but in this case comprised of multiple digitally recorded data such as transactions, agreements and settlements. This digitally recorded data is stocked in a linear chain, which is cryptographically conjoined - meaning that all the data in the Blockchain cannot be tampered with and remains unchanged.

The innovative difference with the Blockchain is that the ledger is not centralised and that it is not stored in one place but spread across an extensive network of computers around the world. With the Blockchain financial transactions can be transferred online without the need of a central party. This aspect enhances the transparency of the system: everyone has access to the network and the most up-to-date version of the ledger.

¹ Eyers, J. (2016, February 6). Blockchain and how it will change everything. *The Sydney Morning Herald*.

² Melendez, S. (2016, June 11). How Banks Learned To Stop Worrying And Love The Blockchain, Bitcoin's Underlying Tech. *Fast Company*.



How does the Blockchain work?

The Blockchain is revolutionary because it is part of a worldwide-shared system of networked computers. Complete transaction histories and financial records can be stored with the help of the interconnected chains of the cryptocurrency.

In the Blockchain financial transactions aren't identified unless they are added to the system. Altering the data is immediately noticeable which makes the Blockchain highly secure.

The debate: Blockchain go or no-go?

Leading financial institutions are exploring the technology and the possibilities to store stock trades and regulatory documents. Storing data in the Blockchain could save a tremendous amount of time and money. This feature alone could become beneficial to financial organisations. However, there is another side to the story. Financial experts argue that the crypto-currency could have the potential to negatively transform centuries-old money transfer-systems. Meanwhile over 300 banking executives across the European landscape believe that the Blockchain tech will not disrupt business models. According to them it will become the main driver for innovative change. Opinions concerning the Blockchain seem to differ. Is the Blockchain a friend or a foe?

Opportunities and chances

DECENTRALISED LEDGER

Virtual money is now being used in many types of transactions with banks or third party administrators as intermediaries. They function as central ledgers. The functionalities of the central ledger

could completely disappear with the introduction of the Blockchain. This can be seen as a threat but it is rather an opportunity. How? The new system enables thousand of transactions (and the information that comes along with it) to be processed at the same time. Instead of people, thousands of computers will tackle the task to appropriately update and secure data. This knowledge alone gives people a feeling of trust. When a central governing authority can't easily change information, a decentralised system like the Blockchain automatically becomes more trustworthy and valuable.

TRANSPARENCY AND HIGHTENED AUDITABILITY BECAUSE OF AUTOMATISATION

The Blockchain technology is based on an automated and decentralised 'consensus-structured system' that keeps any sort of financial agreement or transaction transparent from A to Z. This asset, accompanied with the high level of auditability, makes the Blockchain very appealing. The benefits stem from the fact

that all digital records are arranged in blocks and linked into one chain between different networked users. Because of this feature, the highly complex and inter-connected system is tamper-resistant and minimises the chance of being hacked.

The fact that the ledger is alter-resistant and synched between multiple market participants also gives rise to another benefit: it enables highly competitive trading partners to have a way of doing business.

BIGGER, FASTER... CHEAPER?

The Blockchain is an attractive selling point for businessmen because of its security options. The system is hard to fool or fraud due to the shared decentralised ledger. This standalone fact proves that doubting the validity or chance of error of the technology is not even an option.

Blockchain also offers another advantage: it's efficient. Assets can be transferred at a faster

speed because the centralised party is cut out of the process. The tech innovation also reduces costs because it keeps track of multiple transactions and alternations made to documents at the same time. In conclusion, the Blockchain is bigger, faster and processes transactions at a lower cost.

The opportunities prove that the digital ledger tackles challenges banks have been tackling for many years. The Bitcoin successor is not only transparent and efficient but it could also reduce a lot of managerial costs.

Then why is it that banks retain a rather hesitant attitude towards the Blockchain? As we all know, innovations are and can be revolutionary but they do not only come with benefits and opportunities. Just like any other fintech innovation, the Blockchain encounters several challenges that need to be addressed and overcome before the technology steps into the mainstream scene.

Challenges and possible impacts

With Blockchain's introduction there is a natural tendency to focus on how the innovation will positively transform the Financial Services sector. It is said to drive efficiencies and reduce costs but there is more than meets the eye. The Blockchain offers opportunities only if financial businesses act upon them, otherwise it will do more harm than good.

STANDARDISED PROCESSES ASK FOR MAJOR UPDATES

Bank executives worldwide try to determine the possible outcome of implementing the Blockchain into their current business models. With the crypto-currency there is no denying that banking infrastructure, settlements and customer interactions will

OTHER MAJOR AREAS OF ENHANCEMENT MADE POSSIBLE BY THE BLOCKCHAIN

- ⓑ Quick and immediate validation & settlement of financial transaction
- ⓑ Disappearance of 'physical' assets – digital records can be secured safely using the Blockchain technology
- ⓑ Transparency of pricing throughout the transaction cycle
- ⓑ Improved and increased security options
- ⓑ Minimised delivery risk
- ⓑ Reduced counterparty and delivery risk
- ⓑ Reduced indirect distribution costs
- ⓑ Reduced back office operations and managerial costs

need an appropriate upgrade to prosper. Responding to the upcoming changes is a huge task: banks will have to redefine and reinforce their core beliefs and systems which are so strongly embedded in the industry.

DIGITAL AND COMPUTED NETWORKS WILL TAKE OVER - CONTROL SHIFTS AWAY FROM CENTRAL BANKS

Many Blockchain moguls and enthusiasts claim that the technology has endless possibilities - it transfers data and transactions securely and cuts out centralised parties. But cutting out these so called 'middle men' is not necessarily a good thing for the Financial Services sector.

In the current business models, financial institutions function as central ledgers. With the decentralised ledger system they will completely disappear. This replacement could be as disastrous as the introduction of the Internet was for media like newspapers, television and travel agents.

Prosper if you adapt new legal and regulatory frameworks?

The implementation of the Blockchain requires new legal and regulatory frameworks. With these new frameworks the Financial Services sector will be forced into an era of rapid financial evolution. The big players will have to determine what the technology means for their business models, while startups will have to identify the possibilities: grow and evolve without central control or pull the plug out?

Blockchain and Financial Services: how businesses can adapt

The Blockchain will affect multiple areas which are fundamental to big banks and other financial institutions. How these areas will be affected depends on how the Blockchain will be implemented. According

to The TABB Group survey, regulatory issues pose the biggest problem.³

Although adopting the Blockchain technology will take up several years, there are three crucial steps financial institutions can undertake immediately:

Determine the impact and make long-term plans: It is important that firms contribute valuable time and invest in the needed expertise and technology to understand what the Blockchain and its implementation mean for the current business models. Therefore, planning to diminish the impact and possible implications is required.

Cooperate with other firms, regulators and technology experts: In order to construct the right solutions for specific regulatory processes, firms in the Financial Services sector must work together. To be ahead of certain implications in the implementation process they also ought to work with regulators. The reason for this sort of cooperation has to do with the technology of the Blockchain that needs to be incorporated with traditional business models and current workflows.

For a successful incorporation of the new technologies banks will need to provide active input when it comes to their legacy systems and complex technological environment. In order to meet opportunities instead of implications, industry participants need to choose cooperation over competition.

Seize the opportunity of the internal ledger: The internal ledger system will impose the biggest challenge for banks and financial institutions worldwide. The pressure to combine and centralise the ledgers with the decentralised system of the Blockchain is

³ Synechron Technology Group (n.d.). The case for banks to love the blockchain - Six use cases. Synechron.

immense. A possible solution to lessen the pressure is utilising an application that would enable financial players to test the new technology on their current business models and systems. It would also provide them with stability without the concern for possible network matters.

However, taken the above steps into consideration is not enough. All financial industry participants must be aware of potential benefits as well as threats and develop an accurate response plan that embraces the new methods of transacting and processing.

Conclusion

The Blockchain is the next 'big thing' to entirely innovate or disrupt the Financial Services industry. It is a distributed ledger technology, a crypto-currency that will document, handle and trace all financial transactions. The technology is seen as a revolutionary innovation because it could help establish online trust between unrelated parties.

Although the crypto-currency is in its beginning stage, there are several challenges that need to be resolved before the Blockchain becomes mainstream in the Financial Services industry.

Regulatory and technical issues such as scalability, the time to verify transactions, the cost of transactions and security are the

most challenging issues. These challenges need to be aligned with current business models that are now being utilised by financial institutions.

The road to a profitable implementation will not be easy. In the short term businesses can do some pre-planning to facilitate an appropriate transformation of their services in the long-term. They could develop specific use cases to get a clear understanding of the technology and how it can support their organisation. If they do this accordingly, the Blockchain could be a positive game-changer for Financial Services institutions in improving business decisions and processes like never before.

Our Services: How can FiSer Consulting help?

The Financial Services sector is coming to terms with the fact that the Blockchain forces them to become part of a digital revolution. Still, there is no clear financial incentive to disassemble and replace the current banking systems and infrastructure. Implementing the Blockchain is a somewhat costly and risky operation but that's where FiSer Consulting would gladly assist you.

As an independent niche-consulting firm we have the clear objective and focus how to navigate global banking clients through the new Blockchain territory and how to move to a suitable 'reaction-action' plan.

Next steps

For further discussion on the impact of the Blockchain and appropriate regulatory solutions please contact:

FiSer Consulting | Dirk Worm - Managing Partner

Dirk has over 20 years of experience in the Investment Banking and Corporate & Commercial Banking industries. Dirk's consulting skills lie in risk management, capital management, front office transaction management and the implementation of asset & liability management. Furthermore, Dirk has a comprehensive and broad understanding of treasury functions and the implementation of regulatory processes, including Basel II, III, MiFID and EMIR.



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