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BRIEFING

BLOCKCHAIN, BANKING AND THE "NEW  
NORMAL"

SEPTEMBER 2018

EXAMINING THE BENEFITS  
AND POTENTIAL PITFALLS OF  
BLOCKCHAIN IN THE  
BANKING AND FINANCE  
INDUSTRY FROM SMART  
CONTRACTS AND PAYMENT  
TRANSFERS TO IDENTITY  
MANAGEMENT



This is the second in a series of WFW briefings, focusing on the current and potential future application of blockchain technology, in a number of core industries in which our clients are active.

In the first article, we looked at how blockchain might impact on and change the shipping industry.

We now turn to the exciting possibilities that blockchain technology creates both in what might be termed the "traditional" financial services industry and in the fast developing landscape of so-called "disruptors".

As previously explained, blockchain is a continuously growing list of records, called blocks, which are linked and secured using cryptography. By design, a blockchain is resistant to modification of the data. It is "an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way".

Blockchains are secure by design and exemplify a distributed computing system with high fault tolerance. This makes blockchains potentially suitable for the recording of events, storing records, identity management, transaction processing, documenting provenance and voting.

Looking at these potential applications, one can immediately see how blockchain could, if not entirely revolutionise the way in which both providers and users of

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As regards the banking and finance industry in particular, the benefits in the offing include:

- utilising smart contracts to modernise (and, in part, automate) legal documentation;
- streamlining transaction processing and payment settlement times;
- reducing complexity of agreements and transactions;
- reducing counterparty and fraud risk through a decentralised ledger system; and
- reducing costs for providers and fees for consumers.

Such changes will inevitably see further erosion in traditional "bricks and mortar" businesses but, it is hoped, will also encourage a mode of product and service delivery which both reduces bureaucracy, cost and the time frame within which transactions can be completed and at the same time, increases quality and accessibility.

We've listed above, just a few of the areas in which blockchain technology may be used to enhance the experience of participants in the financial services space. We will now look at three of those examples in more detail.

#### Smart contracts

As we outlined in the first of our series of articles, one of the most promising applications of blockchain technology is in the area of so-called "smart contracts".

Smart contracts are computer programmes that facilitate, verify, or enforce the negotiation or execution of an agreement. Smart contracts often mimic the logic or structure of regular contractual clauses. Many kinds of contractual clauses can, therefore, be made partially or fully self-executing, self-enforcing, or both.

The benefits are obvious: blockchain technology is secure, so smart contracts can be more secure than traditional contract law. Also, they can reduce a number of transaction costs associated with contracting, since blockchain technology cuts out any middlemen. However, the fact remains that the quality of the output depends on the quality of the input. Smart contracts are by no means magical constructs that understand user intent and are always flawless. If there is an oversight in the text, the result might be even more dramatic than in a traditional contract, because the rules of the smart contract are recorded in computer code and cannot be freely interpreted according to "the intent of the contract", but only according to literal meaning.

In summary, blockchain technology can thus be used to initiate and consummate commercial transactions and agreements. It also enforces the obligations of all parties in a contract – without the requirement for interaction with an intermediary, or groups of intermediaries, including, dare we say, lawyers! Simplicity of execution means both time and money saved.

Not by accident did Benjamin Franklin coin the phrase "time's money"...!

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### Payment transfers

The transfer of value has always been an expensive and slow process. This is particularly true for cross-border payments. Blockchain technology is able to speed up and simplify this process - and also reduces the costs significantly.

The payment transfer arena is perhaps that in which new, smaller, nimbler participants – so called "disruptors" – are making the greatest strides and where such players see the best opportunity to steal a march on the older guard of Square Mile, Wall Street, high street and even internet based banks.

Nevertheless, the established banking leviathans are also investing huge sums and significant man hours exploring how they can use blockchain technology to enhance their payment and transfers systems. The irony may yet be that the older, supposedly slower banking tortoise outruns and outlasts some of the upstart hares.

Indeed, the Spanish banking giant Santander is already using the distributed-ledger technology that makes bitcoin possible for international payments of fiat currency.

Competitors include Transferwise, which has become popular by charging far less for international transfers than banks while drawing attention to lenders' fees.

### So how does blockchain work in a payment transfer context?

Traditionally, when you transfer funds, money goes from one bank to another, and then to the recipient's account. The bank acts as an intermediary for your transfer. They'll have all your information (and often collect data about your spending habits), whether you like it or not.

In the blockchain paradigm, assume that party A wants to send money to party B. The new transaction is configured into a "block" and is shown online. The new transaction block is sent to everyone in the network and they help to validate the transaction to ensure it is accurate. Once approved by the majority, the block is added to a chain of recorded transactions in a public ledger, the block is then added to the chain which provides a permanent, non-disputable and transparent record of the transaction. Party B receives party A's money.

In this scenario, the parties are transferring funds to each other directly; no one acts as an intermediary. Those in the network validating the transaction are seeing data relating to the code of the transaction, but not the personal data of the transferor or transferee. Obviating the need for one or more intermediaries not only reduces transaction time and complexity but also cost, as the fees typically levied by such parties are, obviously, removed from the equation.

### Identity management

As the time, cost and human-management burden of carrying out increasingly stringent Anti-Money Laundering (AML) and Know Your Customer (KYC) checks weighs ever more heavily on banks and other financial institutions, the possibility of using blockchain technology is now a serious consideration for such market participants, keen to address on-boarding and other identity establishment and management inefficiencies.

The typical KYC process can delay business as it is estimated that it can take 30 to 50 days to be completed at a satisfactory level.

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If your transactions can be recorded on the blockchain then why can't your identity? The advantage is that no one can falsely claim to be you.

Leveraging blockchain into the KYC process could deliver trust and data security on a platform that enables efficiencies in KYC processes.

Standardising and sharing the storage of account opening information on a blockchain creates a single tamper-proof KYC record that simultaneously addresses the requirement to carry out KYC and demonstrates compliance with applicable AML regulations. The storage of the relevant information on a centralised ledger improves access to accurate information across the industry and creates greater transparency.

When identity management is moved to blockchain technology, users are able to choose how to identify themselves and who will be informed. They still need to register their identity on the blockchain somehow, but after that, they can re-use that identification for other services.

Once entered into the ledger and verified, blockchain facilitates real-time data exchange. It could be used to facilitate not only "intra" (i.e. branch to branch) information sharing but also potentially "inter" bank verification (i.e. one bank to another bank) which reduces processing costs and speeds service and product delivery.

Of course there are still issues to resolve and any blockchain must have the confidence of those both inputting relevant information and those extracting the same for KYC check purposes.

If the AML/KYC process is to successfully move onto the blockchain, two criteria must be met. First, the parties making the updates to the ledger must all be "trusted parties" such as company registries, law enforcement bureaux etc. and, second, there must already be an international legal entity identifier to ensure that all trusted parties are updating the right record. Finally, using some kind of private/hybrid blockchain where a set of parties can update and the rest can "read" off the blockchain, there could be a solution to KYC using the blockchain.

However, blockchain is all about shared control and not just shared data. Blockchain offers anonymity and security despite the shared control. Is that a contradiction in terms? Other issues relate to how, once submitted, data and information will be accessed and subject to future change or updating. Will the blockchain be used for many parties to approve/stamp/update a central registry with their validations or will it be a private blockchain where only the corporate updates its data or will it be a "hybrid", where the corporate and other market participants (such as regulators and/or government authorities or registries) jointly update the ledger in real time? Clearly the ledger can only be as good as the information it contains.

Banks and others are still working on these and other issues and new questions present themselves, as the process evolves. Nevertheless, the potential is apparent and certainly merits careful evaluation.

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### Conclusion

Like Rome, the empire of blockchain and its place, purpose, utility and value within the financial services industry, will not be built in a day. Indeed, establishing a firm and lasting foothold is likely to be a process which plays out over several years, as blockchain applications are identified, developed, refined and supposedly "perfected" and then, likely continually further enhanced and improved. Some will embrace the potential and others shun it but one thing is certain - that the financial services landscape will eventually and inevitably look very different to that which greets us now.

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## FOR MORE INFORMATION

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Should you like to discuss any of the matters raised in this Briefing, please speak with a member of our team below or your regular contact at Watson Farley & Williams.



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