Teneo
The Global CEO Advisory Firm

Crypto in Financial Services

Does crypto technology present a threat or an opportunity for financial services companies?

Teneo Insights
May 2022

Summary

We believe that the capabilities presented by the technology underlying crypto, encrypted, immutable, distributed ledgers, will have a profound effect on the financial services industry over the next few years. As this technology, generically called Cryptographic Distributed Ledger Technology (CDLT) and predominantly blockchain, is open to all parties to use, it's the application of it in a suite of other technology which will define the winners and losers. The incumbent players own the customers now and could continue to do so, but only if they embrace CDLT as a component of digitisation and act rapidly. Equally, new entrants could disrupt the status quo. One thing is clear, it's not an irrelevance.

Our top five affected areas are:

International Trade Finance – CDLT will present a major threat through wholesale automation and disintermediation of the existing players.

The Insurance Market – CDLT is ideally suited to syndicated insurance markets where multiple parties rely on the same data and need confidence that data is reliable and cannot be changed. As a component part of the digitisation of the industry, CDLT has the potential to drastically improve the expense ratios and profit margins of those (re)insurers that can harness the technology.

Payments – The opportunities for change are significant and evolving at pace. The architecture of payments systems is likely to change substantially within the decade with new entrants disrupting current operating models, especially for international payments.

Deposit Taking – Cryptocurrencies may divert money away from traditional deposits. There could also be a degree to which established banks are disenfranchised, as retail customers choose to bank within the CDLT world. Emerging Central Bank Digital Currencies (CBDCs), although not cryptocurrencies, may exacerbate the issues.

Securities Trading, Settlement and Custody – CDLT could become the record for securities transactions and holdings. A single version of the truth database, which would remove the need for complex custody chains and potentially disintermediate many of the existing securities market participants. The settlement of transactions could also be executed via CDLT, providing an opportunity for more expeditious transactions.

Introduction

In this article, we assess what the capabilities provided by the underlying technology of “Crypto” may mean for the existing players in the crypto and financial services sectors[1]. In common with our previous articles, it is non-technical and written to present the material in an accessible style.

The underlying technology of crypto is Cryptographic Distributed Ledger Technology (CDLT), of which blockchain currently predominates. Consider CDLT as a set of identical copies of a multi-page document (the blockchain), to which pages containing transactions (blocks) can be added instantly from anywhere in the world, but cannot be modified afterwards. There is no central control; the participants in the network must agree to blocks being added (a process called consensus). The detail of how this works is irrelevant to the points we make herein.

Background

Everyone’s talking about crypto; in the press, on the web, over a coffee and in the pub, crypto is a frequent topic of conversation. Initially, all the talk was about cryptocurrencies (mainly Bitcoin) as an asset class. Stories abounded of the “friend” who had made millions by buying Bitcoin. Now that’s a little passé, and the fashionable “investment opportunities” are Non-Fungible Tokens (NFTs). Both are, arguably, just as ethereal as each other as their value is determined solely by the existence of individuals who wish to purchase them in the future, their underlying value being zero in most cases.

To-date, most of the development activity has been undertaken by individuals and groups who have launched products and services in an uninformed but enthusiastic world, without the encumbrance of regulatory scrutiny. As such, this is an emerging technology that is about to hit adolescence. Youthful exuberance and relative freedom are beginning to give way to a level of maturity and increasing constraints. The players are having to adapt, the regulators are beginning to react (China, India, Kosovo, USA, etc) and the criminal prosecutors are taking note of the use of cryptocurrencies for nefarious activities (especially on the dark web). The Ponzi and Pyramid characteristics of some of the launches, and the straightforward fraudulent nature of some of the claims, are becoming clear to all. The founders of many of the products and services are individuals with no banking background. To continue to expand, some old-fashioned banking experience will likely be required, albeit with entrepreneurial flair, creativity and open-mindedness.

[1] Note that there are many good articles available on the web which provide a list of the very many potential uses blockchain may have across multiple sectors. CB Insights provides a particularly comprehensive list, 58 Big Industries Blockchain Could Transform.

Bitcoin, the first cryptocurrency/blockchain, is solely a cryptocurrency; the information stored in the blockchain relates solely to the transfer of Bitcoin from one holder to another. The majority of subsequent blockchains use “Smart Contracts” which have intrinsic functionality (i.e. they contain computer code/rules) as well as more data about the transaction itself (metadata); the Ethereum blockchain is the best-known example. Let us start from a position where we have CDLT technologies available that can transact at a speed and volume to support our needs without consuming any more power than the existing fiat-based processes. What can they be used for in the financial services sector?

Opportunity Areas and Implications

Over time, we think there is a distinct possibility that CDLT may become all-pervasive, in the way that mobile computing and internet access now affect all manner of activities which were never envisaged when the Wireless Application Protocol (WAP) was first created in the late-1990s. Below, we have selected those areas where we believe CDLT is likely to start to achieve widespread adoption in the next five years.

1. International Trade Finance

1.1 Current Situation

International trade finance is managed through a network of banks which have bilateral banking relationships (i.e. they have bank accounts with each other). Banks often specialise in certain corridors, meaning that they require bank accounts with several banks in the countries at the other end of the corridor. Those trade banks that offer a broader range of countries have a proportionately greater number of accounts and banking relationships to manage. To provide confidence (or guarantee) that a supplier will receive payment on time, the bank responsible for processing the payment to the supplier (Negotiating Bank) typically holds collateral in the form of a balance in the account it holds for the importer's bank (Issuing Bank). This can tie up significant sums of trapped cash. Physical documents which, among other things, prove shipment, are physically presented to the Negotiating Bank, which checks them and tells the Issuing Bank that all is in order and triggers payment (timing dependent on payment terms and working capital facilities in place).

Independent of CDLT, the trade finance industry is on the cusp of some significant changes with the adoption of digitalisation: electronic signatures and presentations of Letters of Credit, document verification and settlement/financing.

Several consortia have already made progress. The Contour network of banks, corporates and trade partners was launched in October 2020 and continues to attract investors. In August 2021, Standard Chartered announced a joint venture to establish Olea, a CDLT-enabled trade finance platform.

1.2 Future Prospects

The inclusion of CDLT as a component of broader digitisation could lead to a fundamental change to trade finance. The sales contract and terms could be added to the CDLT as a "Smart Contract" with event functionality, such that when the relevant shipment document was added to the CDLT by the shipping company, it could be verified automatically and trigger the payment from the supplier. By automating the process, CDLT could disintermediate the advising/negotiating/confirming bank and even the Issuing Bank. The exporter could become comfortable with an importer anywhere in the world and FX could be handled via conversion from and to a cryptocurrency almost instantaneously. Effectively, Letters of Credit and Bills of Exchange could be consigned to the museum.

Trade finance banks could be left to the not unimportant role of providing short-term working capital lending to suppliers whilst awaiting receipt of payment from the importer's bank/CDLT wallet or providing post-settlement FX financing.

1.3 Conclusion

We see a major threat to the existing players with a loss of volume of Letter of Credit business and a knock-on effect on the related working capital financing business. Those players who are willing and able to invest in the wholesale digitisation of trade finance will be more likely to survive, but margins may well be squeezed.

[1]Based on a government issued currency which is not backed by an underlying physical asset (e.g. gold).
[2]Contour
[3]Stardard Chartered, Linklogis Partnership-Olea

2. Insurance

2.1 Current Situation

CDLT is an increasingly common component of broader "digitisation" which has been at the forefront of the transformation of the insurance industry for some time now. Much of the progress has been made in the personal lines market driven by innovative "InsurTech" start-ups. Commercial (re)insurance markets, which have historically been reliant on manual and paper-based processes, have been much slower to modernise. Nevertheless, in 2016, a consortium of global insurers and reinsurers (including Zurich, Munich Re and Swiss Re) formed the working group "B3i" to collaborate on the use of CDLT. B3i has since incorporated and has successfully developed several prototype solutions for reinsurance processing.

Lloyd's is driving an initiative known as "Future at Lloyd's" with an objective of digitising the 350-year-old London insurance market. This is an ambitious and far-reaching project which will bring much-needed automation and process standardisation to all market participants. CDLT will undoubtedly be part of the technology stack being deployed.

2.2 Future Prospects

The advancement seen in personal insurance in recent years will no doubt continue apace, driven by the needs and expectations of customers who want fit-for-purpose insurance exactly when they need it. The commercial insurance and reinsurance markets are likely to catch up.

By their very nature, insurance and reinsurance markets rely on multiple parties having access to the same information, confident in the knowledge that it is an accurate single version of the truth. CDLT, with its distributed nature and immutability, appears to fit the bill perfectly. It is easy to appreciate how it has strong applicability across all insurance sectors and especially to the syndicated commercial insurance market. Although commercial insurance has been slower to adopt digitisation, with CDLT comes a disrupter that could accelerate change. The opportunities, therefore, appear significant, and it is likely to be the speed of adoption of the new technology to "do business better" that will determine the winners and the losers. InsurTechs and other innovators will continue to disrupt the industry by providing a seamless customer experience and frictionless operating models.

The likes of Google and Amazon are also beginning to provide insurance solutions. They are likely to be at the forefront of the application of CDLT and could conceivably represent a significant threat.

2.3 Conclusion

CDLT is likely to accelerate the already significant digitisation of the insurance industry. Incumbent underwriters and reinsurers will need to adapt rapidly if they are to survive and enjoy the cost savings which digitisation offers.

3. Payments

3.1 Current Situation

Although the press likes to hype up cryptocurrencies as forms of payment, the reality is somewhat more muted. It is true that there have been some high-profile announcements in this regard. Several prominent names are piloting acceptance of Bitcoin in some form; however, one could surmise that this is for marketing reasons rather than a bona fide enhancement/improvement to their offers. These include Sotheby's, Coca Cola, PayPal, Visa, Amazon and Starbucks. Tesla briefly supported it, until it realised the environmental implications and stepped back. In June 2021, El Salvador made Bitcoin legal tender. The reality is that, although it is possible to make payments with cryptocurrencies, we are not currently at a point where cryptocurrencies are a threat to fiat currencies.

However, current fiat payments processes, especially for international payments, are archaic, expensive and slow. The third-generation cryptocurrencies are being developed specifically to address the significant operational issues associated with bitcoin and the like so that they can be competitive with the existing fiat payment systems.

It is worth noting, however, that cryptocurrencies are already the payment form of choice for the black market/ dark web.

3.2 Future Prospects

We are likely to reach a point soon where third generation CDLT solutions could support the volume and transaction speeds required to enable its wholesale adoption for payments without consuming vast amounts of power. Whereas systems such as Faster Payments in the UK can provide a fast, easy to use and cheap solution for domestic payments, international payments can be slow, expensive and rather cumbersome, necessitating many bilateral agreements between banks to make it work. The SWIFT messaging system is also required to identify and communicate with a chain of banks to connect the sender to the recipient.

3.3 Conclusion

With the current level of investment and pace of change in the CDLT arena, the opportunities for change are very significant. We believe the world is about to see fundamental changes in payments, the likes of which we have not seen before. Many of the incumbent large players are likely to be replaced by new entrants. A few incumbents may be agile enough to adapt and survive. As a result, payments are likely to look strikingly different by the end of the decade[5].

[5]For more detail on this topic read our previous article, "Cryptocurrency Payments".

4. Deposit Taking

4.1 Current Situation

Deposit-taking has been at the heart of banking for an eternity and is central to the traditional banking business model. The fact that the market capitalisation of cryptocurrencies is over USD2tr[6] and the NFT market reached USD41bn[7] in 2021 indicates that some fiat money which would have been deposited with banks is being diverted to other asset classes. The staking or liquidity mining of crypto assets are forms of investment akin to bonds, or indeed swap deposits, albeit with a highly volatile currency which has no intrinsic value.

Central Bank Digital Currencies (CBDCs), although not cryptocurrencies and not using CDLT, could also divert deposits away from banks[8], thus exacerbating the issue.

4.2 Future Prospects

Without deposits, banks will have to rely more heavily on more expensive wholesale funding, which will, in turn, make borrowing more expensive for clients. An alternative, non-bank, platform may also disenfranchise banks, with many retail customers choosing to bank entirely within the CDLT world, whether for legitimate reasons or to obtain a degree of anonymity and/or to avoid client take on issues.

4.3 Conclusion

Bank deposit-taking is subject to several converging pressures: cryptocurrencies, low interest rates, a move away from cash and CBDCs. For those banks that rely on retail deposits and/or cash-based commercial banking, the combination of pressures represents a threat to the traditional banking model. If borrowing becomes more expensive as a result, the lending aspect of banking will also come under pressure. The initiative and momentum on rethinking the model are currently with the cryptocurrency innovators and challenger banks. However, we anticipate that the established banks will be quick to catch up, and the power of their existing franchise and knowledge of how to operate in a regulated environment will see them remain competitive.

[6]Statista 13 January2022. Note that the majority of this "value" is growth of the original investment, not the original investment itself.
[7]Markets Insider Jan 2022
[8]Central bank digital currencies: financial stability implications

5. Securities Trading, Settlement and Custody

5.1 Current Situation

The current infrastructure, processes and terminology have evolved from a paper-based system over centuries, with minor improvements to the original 17th century approach (e.g. dematerialisation, where securities can be registered and transferred electronically). Depositories, custodians, Central Securities Depositories and registrars are frequently talked about with different definitions across firms. The distinctions between them have also blurred. Visibility is poor and slow across the custody chain; for example, company cancellations are frequently not communicated down through the custody chain, and obtaining information on funds in liquidation can be almost impossible. Overall, there is significant room for improvement.

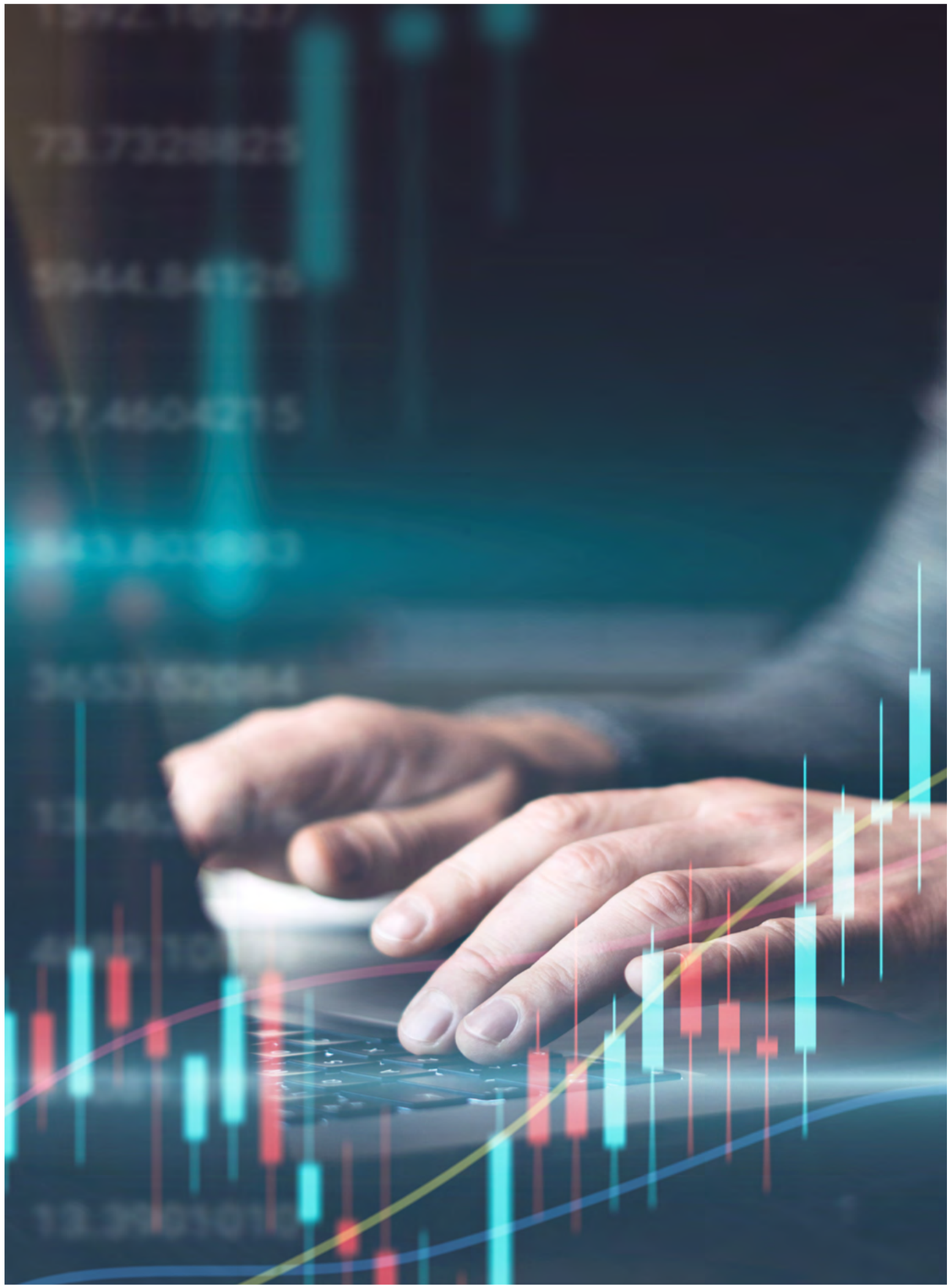
5.2 Future Prospects

A CDLT could become the single (albeit distributed) ledger for securities transactions and holdings on an international basis. It could provide a single version of the truth database, available internationally 24 hours a day, 365 days a year. This would make complex custody chains redundant and avoid the need to request and pass information slowly up and down the chain; an essential requirement, for example, when managing non-transferrable securities. Visibility of book cost (essential for capital gains tax reporting purposes) over many years and a multitude of transactions would be easy to obtain. Contract note information would be available in perpetuity. Settlement could also be achieved on the CDLT.

Investment platforms could deal directly with the CDLT. This could disintermediate several layers of the custody chain (e.g. Depositories, Central Securities Depositories and sub-Custodians) with a significant decrease in cost. Any of the existing investment platforms/asset managers/ private banks not adopting this approach, could find themselves at a competitive disadvantage in terms of both cost and level of customer service.

5.3 Conclusion

The prima facie case is that there is substantial room for improvement that the adoption of CDLT could address and which would present a significant threat to the existing players. However, for most clients, the current weaknesses and cost inefficiencies are largely invisible. Therefore, rapid adoption of CDLT to this topic is not guaranteed. On the other hand, if a major player or consortium was to make the investment, it could be a game-changer.



Threats to Incumbent Players

On the one hand, the threats are existential. Fundamental changes to how financial services products and services operate could come very rapidly. The incumbent players could be disintermediated and see their offerings become redundant, in a similar way that Kodak did when digital photography appeared and canals did when the railways took over. An inability to react quickly enough could mean death for many firms. However, it is not all bad news. In essence, third parties are developing infrastructure components that financial services companies could adopt. These technologies are open source and "owned" by the network. Therefore, they don't need to be bought, but merely used and integrated into the existing and/or next-generation infrastructures.

We are already seeing examples of salaries being paid in cryptocurrencies. If products and services can be purchased using cryptocurrencies, the whole financial system could avoid any need to link to traditional fiat currencies. Such parallel crypto economies could disintermediate governments which could lose their hegemony of domestic economies through the loss of relevance of their currency and control of their tax revenue. The emergence of CBDCs is, in part, a response to this threat.

Conclusion

CDLT, as a key component of the wider digitisation of financial services, presents a substantial opportunity to revolutionise the underlying infrastructure and costs and to improve customer experience, to the benefit of all. As the CDLT itself is open to all parties to use, its application in a suite of other technology will define the winners and losers. The incumbent players own the customers now and could continue to do so, but only if they embrace CDLT as a component of digitisation and act rapidly. Equally, new entrants could disrupt the status quo. One thing is clear, it's not an irrelevance.

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