

Blockchain: A Catalyst for Coopetition and Transparency in the Financial Sphere

Blockchain : Un Catalyseur de Coopétition et de Transparence de la Sphère Financière

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Abstract

This paper explores the concept of coopetition, introduced in the 1980s, which combines the advantages of competition and cooperation. It examines the motivations for cooperation, situations of global coopetition, and approaches to understanding the variety of demands. Despite the potential benefits, it highlights the tensions and paradoxes inherent in cooperation and competition.

Focusing on the adoption of Blockchain technology in the financial industry, this contribution highlights, from a documentary approach combined with collected use cases, the opportunities and challenges linked to the adoption of this approach, highlighting the importance of coopetition positioning of Blockchain ecosystem players and the involvement of national and international regulators for the development of Blockchain technology projects.

Keywords: Coopetition, Blockchain, Disintermediation, Fintech, Innovation.

Résumé

L'article explore le concept de coopétition, introduit dans les années 1980, qui permet de combiner les avantages de la concurrence et de la coopération. Il examine les motivations de la coopération, les situations de coopétition à l'échelle mondiale, et les approches pour comprendre la variété des demandes. Malgré les bénéfices potentiels, il souligne les tensions et paradoxes inhérents à la coopération et à la concurrence.

En se concentrant sur l'adoption de la technologie Blockchain dans l'industrie financière, cette contribution met en lumière à partir d'une approche documentaire combinés aux cas d'usages recueillis, les opportunités et les défis liés à l'adoption de cette approche, soulignant l'importance de positionnement de coopétition des acteurs de l'écosystème de la Blockchain et l'implication des régulateurs nationaux et internationaux pour le développement de projets basés sur la technologie Blockchain.

Mots clés : Coopétition, Blockchain, Désintermédiation, Fintech, Innovation.

Introduction

In a context of rapidly evolving technologies, economic agents are increasingly faced with the need to cooperate in order to innovate while remaining in direct competition. This phenomenon, known as "coopetition", is now a key theoretical framework for understanding complex interactions between firms, particularly in technology-intensive sectors. The concept of coopetition, which combines the dynamics of cooperation and competition, has become increasingly relevant with the emergence of technologies such as Blockchain, which challenge traditional market and power logics.

With its promise of decentralization, transparency and secure transactions, Blockchain is overturning established practices, particularly in the field of payment systems. While this technology was initially perceived as a direct competitor to traditional financial institutions, we have to admit that more and more banks and payment service providers are choosing to adopt it, sometimes even collaborating with their competitors. This trend raises a fundamental question: **Why are traditional industry players investing in a technology that appears to threaten their established business models?**

This apparent paradox can be explained through the prism of coopetition. Indeed, in a sector as strategic as payment systems, Blockchain offers not only the opportunity to improve performance (security, speed, cost), but also the possibility of pooling resources to reduce development costs while maintaining a degree of competitiveness. Blockchain consortia, which bring together historically competitive players, are a perfect example of this cooperative dynamic, where companies work together to build common infrastructures while trying to capture market share.

This article aims to explore in depth the dynamics of coopetition in the context of Blockchain adoption by payment systems, based on a literature review analysis of existing cases. It lays the foundations for a research continuum that will be further developed through an interpretative positioning. The chosen qualitative method, centered on semi-directive interviews with a representative composition of actors in the financial and payment sector, will seek to answer several key questions:

What are the motivations behind investments in Blockchain technology? How is the potential of Blockchain perceived when implemented in public networks to promote disintermediation of banks? What initiatives are competitors taking to pool their innovation efforts? Finally, what concrete manifestations and results are emerging from these collaborative approaches within the sector?

This article is divided into three parts. First, it analyses coopetition through a literature review, drawing on key theories and concepts. Next, it develops coopetition in the context of Blockchain use cases, showing how it manifests itself concretely between industry players. Finally, a conceptualization of the empirical work is proposed, which will be further developed in a forthcoming paper, along with the expected findings of this study.

1. Literature review on the bangs of the coopetition strategy

In the 1980s, the concept of coopetition was introduced (Brandenburger A. and Nalebuff B., 1996). It offers the possibility of combining the benefits of competition and cooperation in a variety of situations. According to Y. Luo (2007), the study of global coopetition examines four situations (contestatation, isolation, partnership and adaptation) of cooperation and competition between two global competitors on a worldwide scale. He proposes four approaches (dispersion, concentration, connection and networking) to understand the variety of demand.

The document also explains the motivations for cooperation, such as interdependence between parties, competition and the desire to collaborate. Market community and symmetry of resources play an essential role in competition and cooperation, as demonstrated. According to G. Hamel, Y. Doz and C. K. Prahalad (1989), competitive collaboration not only improves rivals' in-house skills and technologies, but also protects against competitive advantages. Collaboration also reduces the expense, risk and uncertainty associated with innovation (H. Meyer, 1989), (K. Walley, 2007).

Although the benefits are there, (T. Raza-Ullah, M. Bengtsson and S. Kock, 2014) highlight the paradox and tension of the collaborative relationship. They argue that cooperation and competition are difficult to reconcile, and that one side can be too strong relative to the other, reducing the benefits of cooperation and competition. The opposing constraints of cooperation and competition explain this coopetition paradox; it occurs when collaboration with a rival increases its competitiveness (D. R. Gnyawali and B. Park, 2009), (F. Le Roy and W. Czakon, 2016).

Some studies suggest that organizations need to separate competition and collaboration within the company (M. Bengtsson and S. Kock, 2000), (M. J. Dowling, W. D. Roering, B. A. Carlin and J. Wisnieski, 1996), (T. Herzog, 2010), while others indicate that individuals need to integrate individually to resolve the paradox (M.- J. Chen, 2008), (T. K. Das and B.-S. Teng, 2000), (I. Oshri and C. Weeber, 2006). J. Chen, 2008), (T. K. Das and B.-S. Teng, 2000), (I. Oshri and C. Weeber, 2006).

Relationships between companies targeting the same customer are clearly characterized by strong competition. Each company tries to promote its own business over that of its competitors. Organizations are mainly forced to collaborate with their competitors due to the evolution of technology and the globalization of economies (Fernandez and Le Roy 2010, 2013).

Collaboration with competitors brings to mind an emerging concept known as coopetition. Coopetition is a relationship that develops in strategic management when two or more competitors (Gnyawali and Park, 2011; Bengtsson and Kock, 2000) (Dagnino et al., 2007; Gnyawali et al., 2008; Bengtsson and Kock, 2014) opt for cooperation.

It involves the implementation of both cooperative and competitive strategies (Brandenburger and Nalebuff, 1996; Bengtsson and Kock, 1999, 2000), and therefore the simultaneous combination of two opposing relational modes: competition and cooperation (Bengtsson and Kock, 2000, 2014). Although coopetition has been the subject of much research, one very important aspect remains little studied: the relationship between coopetition and imitation.

Companies have always perceived coopetition as a risky strategy (Park and Russo, 1996; Pellegrin-Boucher et al., 2013), and the main risk lies in the imitation of skills and technologies by their rival (Gnyawali and Park, 2009; Bez et al., 2016). This is due to the correlation between collaboration and imitation, which is always analyzed in terms of resources. In a cooperative context, studies restrict the notion of imitation to the capture of the rival's skills, knowledge and technologies, completely neglecting imitation in strategic management.

It's important to note that imitation is a strategy that has repeatedly demonstrated its benefits for businesses (Ethiraj and Zhu, 2008; Lee and Zheng Zhou, 2012). In the field of management, imitation is an open option, as it is possible to imitate everything (Bourkha, 2014).

Imitators can choose to imitate whatever is considered advantageous for their organizations. Moreover, imitation is not restricted to resources alone. Several options remain available for making an imitation decision, which can be a real strategic decision for some companies (Bourkha, 2012; Mouricou, 2009).

Motivated by the benefits and wide range of use cases for Blockchain technology, as well as the lack of attention paid to the human factors of Blockchain technology adoption, this paper aims to contribute to the existing body of research on Blockchain technology adoption with a coopetition approach between stakeholders, through an exploratory study on the financial industry through use cases across the World. We examine how stakeholders could establish a competitive relationship based on their demand and motivation for a shared application of Blockchain technology.

Coopetition is a mixture of competition and cooperation (A. Brandenburger and B. Nalebuff, 2021), and is often used to reduce costs, avoid duplication of effort or exchange skills between different parties. A recent report shows that coopetition has various advantages when using decentralized technologies, where a consortium based on a decentralized technology enables the individual organization to better leverage the network effect for its own specific needs (L. Pawczuk, P. Wiedmann, and L. Simpson, 2019).

To fill research gaps, this exploratory study focuses on the following questions: How can a cooperative approach foster the adoption of Blockchain technology at the financial industry level; and what are the opportunities and challenges presented by such a cooperative approach?

2. Blockchain players' coopetition use cases

The information for this research was gathered and derived from secondary and public sources, such as various reports and documentation from different government agencies and organizations.

The necessary and substantial investments made by banks to develop a common Blockchain are normally offset by streamlined, cost-effective internal IT processes and also by closer collaboration between institutions. Building such Blockchain ecosystems is precisely the aim of the various consortia in which most of systemic banking groups are participating.

In the French banking sector, Blockchain has become a recurring topic, as it has in countries such as Switzerland, the USA and France. We observed in this study that the National Central Bank has asked local banks to be able to distribute and manage a state-owned cryptocurrency in 2020.

Indeed, it seems essential that national and international regulators get involved in the development of Blockchain-based projects. If they are not certain that the principles of the new solution will be accepted by regulations, manufacturers will not launch into its development.

What's more, the very concept of Blockchain is one of partnership: this technology facilitates exchanges between various players, which implies that all links in the exchange chain are involved.

The CBDC experience is a noteworthy development in the digital transformation of money, bringing advantages to retail and wholesale applications through the use of Blockchain technology. As digital assets, central banks back up CBDCs, giving banks, organizations, and people a safe and effective way to make payments and settle deals. CBDCs have the potential to streamline reconciliation procedures, increase financial access, spur digital innovation, and improve monetary policy—more than 70% of central banks are currently looking at them.

Within the CBDC ecosystem, Blockchain platforms like Ethereum provide essential benefits like system trust, programmability, data availability, and innovation. Central banks can retain control while granting people privacy and autonomy by incorporating this technology.

For example, to carry out a financial transaction via the Blockchain between a Spanish and a Singaporean company, it is essential that the banks of both companies are part of the same Blockchain in order to carry it out. In this way, as the number of players involved in a Blockchain increases, the interest and scope of the proposed solutions will increase, but its implementation will take longer and require a major convergence effort.

In the Utility Settlement Coin (USC) project “Some of the world's biggest financial services firms - including Barclays, Nasdaq and UBS - have pumped £50 million into a new venture building a Utility Settlement Coin (USC), an asset-backed digital cash instrument implemented on distributed ledger technology”, some of the world's leading financial institutions including Barclays, Deutsche Bank, Nasdaq and UBS are combining the benefits of crypto-currency with traditional currencies. The aim is to facilitate transactions using Blockchains, first between banks and then between companies.

JP Morgan, an American bank, is the first to announce the creation of its own crypto-currency, based on the dollar: the JPM Coin “JPM Coin is a permissioned system that serves as a payment rail and deposit account ledger, that allows participating J.P. Morgan clients to transfer US Dollars held on deposit with J.P. Morgan within the system, facilitating the movement of liquidity funding and payments in right time”. It will offer the possibility of financial exchanges between institutions, companies, banks and investors. The crypto-currency aims to offer JP Morgan customers the ability to exchange funds more quickly than through traditional channels, while securing the value of distributed JPM Coin tokens. The token issuance method is Quorum (a version of Ethereum).

Another interesting Blockchain application already in production: the international trading platform We Trade now has 14 participating banks. Here, too, major European banking institutions are working closely together to simplify national and international trade between small and medium-sized enterprises. The aim is to simplify national and international trade financing for companies, so that commercial transactions can be carried out more efficiently and securely.

Ajna, an Ethereum-based protocol, provides a Web3 frontend for lending and borrowing cryptocurrency, demonstrating the possibilities of DeFi. This decentralized protocol demonstrates how Blockchain technology might improve the efficiency, security, and

accessibility of financial services. Ajna shows a pragmatic approach to DeFi solutions with a project size of USD 475k and a small development team.

With over 170 members, the Hyperledger open-source initiative enables a global community of developers to collaboratively maintain Blockchain technology. Access to these open-source technologies is also open to businesses, including financial services institutions.

In the R31 consortium, financial institutions and banks are working closely together, testing Blockchain use cases in areas such as digital identification or market transactions.

At the start of 2019, several major US insurers announced their collaboration with IBM to develop Blockchain-based solutions: they would be looking to exchange their databases, particularly to process restitution files. Blockchain would give them the opportunity to cut expenses by reducing the administrative costs associated with these operations.

According to Cryptot France Website, at the end of 2018, PNC Bank, which is the 9th largest bank in the United States, joined Ripple's Blockchain-based enterprise network. Its aim is to make it easier for its members to carry out international money transfers almost instantaneously. The documentary research reveals the diversity of the use of Blockchain technology by the players of the French banking sector, both within banking establishments and in their various departments.

At present, it seems that Corporate and Investment Banking is more interested in Blockchain than Retail Banking.

CIB carries out many activities that require highly manual, non-dematerialized management of transaction operations, such as documentary credit, reconciliation or financial asset management. These operations offer an excellent opportunity to test new processes based on Blockchain, which would reduce the risk of errors and fraud, while ensuring greater security of exchanges. In addition, the uses of Blockchain in CIB activities offer the possibility of using mainly private or consortium Blockchains, which are less complex to develop because they are created with a circle of trusted partners.

On the other hand, usage situations specific to Retail Banking require more time to be integrated as they usually directly involve individual end customers, resulting in a significant change in their practices.

Understanding of Blockchain technology remains concentrated in specific technology areas. According to the interviews conducted, it was observed that most Blockchain-based projects

¹ R3 is the leading provider of Digital Currency, Digital Asset, and Integration and Interoperability solutions to the world's leading financial players.

were driven by a few departments: IS, innovation, digital and data. Generally speaking, business departments are involved during the development of these projects to verify the use cases and their suitability for integration into the operational environment.

The reason for this observation lies in the fact that Blockchain is still seen as a highly technical solution, still evolving, and less affordable for operational staff. Before it can prove itself technologically, it still needs to be introduced to the business. What's more, although there are many meetings between Blockchain experts, there are few learning schemes offered to operational staff and support functions within institutions.

What's more, Blockchain is still little taken into account by the General Management of major banks due to its lack of maturity.

In another experiment, two crypto banks (Sygnum and SEBA) received In August 2019 authorization from the Swiss Financial Market Supervisory Authority (FINMA) to carry out Token exchanges between their customers and conversions of Swiss francs into cryptocurrencies.

To combat the financing of terrorism, it will be necessary to identify customers wishing to transfer Tokens, in order to circumvent the anonymity associated with the use of the Blockchain.

According to ICT Journal Website, since the beginning of 2019, a Swiss bank, UBS, has been offering its customers the opportunity to use the trading platform We trade, which provides security and financing for trade transactions in Europe thanks to Blockchain technology based on Hyperledger Fabric.

And through browsing the data of ICT Journal Website, in December 2019, UBS and Credit Suisse began trading bond baskets via a Corda Blockchain platform. As a result, changes in ownership of these bonds were registered in the distributed ledger.

3. Methodological and theoretical approach and expected results

A qualitative methodology will be used to conduct the remainder of the empirical study, as it is the most appropriate approach for the needs of our research. Qualitative methods are particularly useful when the goal is to explore complex phenomena in depth, understand underlying motivations, or gain insight into perspectives and behaviors that are not easily quantifiable. In this context, qualitative research allows for a more flexible and in-depth exploration of how companies are engaging with Blockchain and coopetition in the payments space.

The choice of semi-structured interviews is justified by the need to give interviewees the freedom to express themselves openly, and to guide the conversation as it naturally unfolds. This format allows for deeper insights while still adhering to a structured set of topics. The companies selected for the interviews include a balanced mix of international and Moroccan companies, covering key players in the payments market, in particular regulators, service providers and banks (as users). This range of participants ensures a comprehensive understanding of the dynamics at play.

The main objective is to gather insights on the impact of Blockchain technology on their payment systems, and to explore how their investment strategies in Blockchain are justified through the lens of coopetition theory. Specifically, we aim to understand how cooperative competition (coopetition) has influenced their decision-making processes and strategic choices regarding this technology.

The added value of this research lies in its potential contribution to the Moroccan economic framework. By first analyzing use cases borrowed from international contexts and then verifying them through empirical studies in Morocco, the research will provide valuable insights and guidance for future implementation. The research propositions are closely aligned with the theoretical framework, drawing on institutional design, coopetition theory, and decision-making theory.

Conclusion

In terms of major research contributions, this paper examines how a decentralized technology is adopted using a competition-based approach within the financial industry. According to our research, adoption could be facilitated by creating a consortium based on competitive relationships between players in the financial industry.

The key word here is coopetition. In addition to their present traditional rival activities, banks are working together to develop a private and shared Blockchain, significantly increasing the operational efficiency of the processes.

The different uses of Blockchain are varied and all illustrate real, even revolutionary, potential in any organization, whether private or public. Blockchain is not a solution in itself, but rather a tool that can help make the underground economy more formal, while ensuring traceability and transparency of financial flows. It is not capable of restoring trust on its own. It only serves to complement genuine structural policies, which will have to persuade the population to place their trust in them.

We have noted that Blockchain is a complex technology that is still underdeveloped on the market: its adoption by businesses, particularly banks, is very varied, the realm of its possibilities has yet to be explored and no standards have been established. That's why banks are now grouping together and working with experts in consortia to conduct a number of experiments. These consortia then raise the question of the responsibility of each party in the development of Blockchain, as well as in guaranteeing and monitoring its proper functioning. Based on the initial results of experiments, the financial industry is now convinced that Blockchain technology has potential, and that its use could improve certain processes.

Banks typically balance their significant and required investments in developing a common Blockchain by more efficient internal IT procedures and increased cooperation across institutions. Creating these Blockchain ecosystems is the specific goal of the several consortiums that the majority of systemic banking entities are involved in.

Indeed, it appears to be particularly effective in enhancing transaction security and traceability, combating fraud and reducing transaction costs and times, while continuing the process of digitizing operations that has already been underway for several years.

With a wide range of uses, such as financial securities management, crowdfunding innovations, SME financing, and Bitcoin transaction facilitation, Blockchain technology is transforming the financial industry. The flexibility of Blockchain is demonstrated by projects like IBM's Digital Trade Chain for SME international trade financing and programs to digitize and manage stocks for unlisted enterprises.

Furthermore, financial services are offered beyond the confines of traditional banks through decentralized finance, or DeFi, which makes use of Blockchain technology. DeFi apps can create protocols with more transparency, openness, and interoperability thanks to Blockchain technology and smart contracts. Users can lend, borrow, and trade without middlemen in a transparent and safe environment with DeFi.

And in regard to the main limitations, which can serve as a gateway to other related research topics in the future. Blockchain still faces certain constraints that hamper these initiatives and will need to be overcome if its full potential is to be realized. One of the key elements is matching the use of the technology with regulation. Indeed, national authorities, whose opinions and intentions for progress vary from country to country, must take these practices into account to enable the legal exploitation of Blockchain.

The banks' operating model is undergoing a slow and continuous transformation thanks to Blockchain, which is in line with the changes already made by the banking sector in recent years, such as robotization (RPA) and artificial intelligence (AI).

In addition to regulatory issues, another important constraint relates to commercial interests. For Blockchain to be widely adopted, it is crucial that it meets the expectations of end users. FinTechs and startups often develop use cases based on the requirements of the companies that commission them. In this context, it is incumbent on these companies to question the real utility of the solutions they develop for their users. This is even more important in a highly competitive market where the slightest mistake can lead to failure. A striking example is that of several payment applications that, although initially promising, had to be abandoned for lack of consumer use, illustrating the need to match technological innovation with real needs.

The second key issue concerns the scalability of Blockchain networks. To what extent can a Blockchain network support the volume of transactions processed today by traditional payment systems? This scalability issue is central to the widespread adoption of this technology. For example, the processing time for transactions on the Bitcoin network, from node 0 to its current state, remains much longer than that of centralized systems. This slowness poses limitations in high-frequency transaction environments, such as traditional payment systems or cross border payments.

Another challenge is compliance with identity verification requirements, particularly with respect to Know Your Customer (KYC). The pseudonymous nature of Blockchain transactions can raise security and compliance issues, making the technology vulnerable to abuses such as money laundering or arms trafficking. To remedy this, it is imperative that a verified identity be associated with each node in the Blockchain. Without this precaution, the network could become a loophole to evade all forms of surveillance.

Finally, an important issue to consider is the balance between user privacy and transaction confidentiality. Traditional payment systems rely on international conventions and agreements that guarantee the protection of users' personal data. This equivalent does not yet exist in a robust way in the Blockchain ecosystem. This raises the question of how far data protection should go without compromising user privacy.

To conclude, in today's world, the real wealth of companies and nations lies in the management and monetization of data (information tokenization). The ability to extract strategic information from collected data opens up immense prospects, whether for economic policies or commercial strategies. In this sense, Blockchain is undoubtedly a powerful tool to win the data battle.

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