

# The Application, Challenges and Legal Supervision of Blockchain in Cross Border Payment in China

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## ABSTRACT

Exorbitant costs and extensive lead times are key concerns for transboundary payments. Transboundary deals face greater development challenges than domestic payment systems since they require a high degree of trust and include currency conversion. In this context, blockchain can successfully establish new cross-border payment services and promote cross-border commerce by employing a distributed public ledger that integrates public key encryption and peer-to-peer technology. Blockchain has got two key characteristics: distributed consensus and anonymity. By eliminating intermediaries between third-party finance agencies, it not only allows for instant payments around the clock but also contributes to mitigating the exposure to transboundary capital flows and meeting consumer needs for expedient transboundary payments and clearing services. This paper argues that while blockchain technology eliminates problems and presents effective strategies for conventional transboundary payments, it also raises many legislative and regulative issues for China. As the law itself is not yet mature, especially given the changes in international payments in the wake of the epidemic, it is worthwhile to explore the operating rationale and regulation obstacles of blockchain to the maximization of profits and minimization of risks in transborder payments by leveraging its inimitable strengths.

**Keywords:** *Blockchain, Cross-border payments, Legal challenges, Public-private partnerships.*

## 1. INTRODUCTION

In late 2008, Satoshi Nakamoto presented "Bitcoin" in the white paper, groundbreaking the usage of blockchain to create a networked system that permits both partners to conduct exchanges with no reciprocal trust[1]. The blockchain technology serves to address the drawbacks of conventional financial structures, where money cannot be freely disseminated like information, enabling 'value transfer'. Blockchain is the underpinning technique of Bitcoin and could potentially radically change the finance sector and fuel the "fourth industrial revolution".

Nevertheless, everything has two sides. Although blockchain is favoured by large finance organisations, it also poses a number of legal and regulatory challenges. First, given its heightened anonymity, blockchain could easily be manipulated by perpetrators to facilitate their criminal activities by masking their identities through cryptography. Secondly, the irreversibility of blockchain has the

disadvantage that there is no central authority to correct payment errors or defend against attacks, leaving customers vulnerable to hacking. From a regulatory perspective, regulation is further complicated by the inherent statelessness of virtual currencies and the need for multiple jurisdictions to regulate cross-border payments. These point-to-point transactions are external to the conventional finance market and not able to be supervised efficiently in the usual manner, making it very easy for miscreants to take advantage of legal loopholes to avoid taxes.

It is therefore important to explore how blockchain works on a technical level and how practical and effective regulatory approaches can be applied to blockchain networks. Abdul Rasheed Ghaffour, Deputy Governor of Bank Negara Malaysia, emphasised that trust, connectivity and innovation are the cornerstones and pillars of transboundary businesses[2]. Firstly, trust is a precondition for trading. Merchants will only have confidence in the use of blockchain if they are

certain that their commercial transactions are secure and strictly regulated. In the second place, as China gets more international, more and more foreign financial institutions are participating in transborder deals[3]. This demands that oversight should aim to strengthen alignment among the various payment systems to facilitate interoperability. Finally, due attention should be paid to the innovative nature of blockchain, and the focus should be on reshaping regulatory approaches through distributed ledger technology. Given the emergence of the fintech, it is important for supervisors to promote healthy competition amongst commercial providers and to minimise or prevent the negative influences of oligopolies so as to facilitate the further robust growth of financial markets. The aim of this paper is also to make technology work better for society.

The content of the article proceeds as follows. The first part provides an overview of blockchain, which summarises the many advantages of blockchain in transborder payments and discusses its practical applications. The second part examines the challenges posed by blockchain for transborder payments to China from a governance perspective. The third part addresses the governance challenges described in the previous section and proposes solutions from the perspective of Chinese regulators. The final part concludes.

## **2. AN OVERVIEW OF BLOCKCHAIN**

To address the challenges that blockchain technology presents to transborder transactions in China, it is necessary to examine the features of blockchain and the ways in which it can be applied in the first place.

Smart contracts are among the most important elements of the blockchain technology. They make it possible to perform automated transactions on the blockchain. They are also considered an important step in the development of decentralized finance. Smart contracts are becoming more prevalent in the area of financial transactions. They can record and track transactions, which could significantly reduce the time and effort involved in processing complex transactions. Smart contracts are some of the most promising solutions for future operations[4].

The potential of blockchain to become mainstream is linked to the various advantages it offers. There are three main advantages of using blockchain for cross-border transactions.

The high level of security offered by blockchain technology is the first advantage of this method of

payment. Aside from keeping transactions secure, it also allows merchants to store and process transactions without requiring their bank account information to be stored [5].

The second advantage is that transaction expenses are reduced. While conventional transboundary deals are pricey and time-consuming, blockchain-based transboundary transactions allow for peer-to-peer matching, removing middlemen and lowering transaction costs. According to a McKinsey study, blockchain technology can assist participants in cross-border payment and settlement activities to save 42 per cent on deal expenses[6].

Third, it enhances the efficiency with which monies are used. Customers must set up many margin accounts for multiple transactions at different banks under the old approach since each bank has a separate system. This significantly decreases the efficiency with which monies are used. Transboundary blockchain payments, on the other hand, require only a single margin account that may be used for transactions by many banks. This implies there is much less money in the account and it may be utilised more efficiently.

## **3. CHALLENGES POSED BY BLOCKCHAIN CROSS-BORDER PAYMENTS TO CHINA — THE GOVERNANCE DIMENSION**

The usage of blockchain technology in transboundary payments has far-reaching consequences for national taxation. At present, a considerable amount of Chinese transnational corporations or affiliates take advantage of the differences in tax systems and regulations in diverse tax jurisdictions to make taxable profits "disappear" or transfer them to low tax rate countries (regions) where there is no or minimal commercial operations of substance, achieving the goal of paying no or little corporate income tax. The integration of blockchain and cross-border deals enables wrongdoers to easily use virtual currencies as intermediary currencies, making transboundary fund transfers even more insidious and, inevitably, making China's current national tax evasion prevention efforts to regulate and track more difficult. While China has joined the "base erosion and profit shifting" movement, officials have a big governance issue in modifying rules to prevent blockchain from being used to boost tax evasion[7].

Another issue at the governance level is the lack of transaction enforceability. The process of disposing of and obtaining assets is a fundamental feature of blockchain, where the implementation of smart contracts is totally regulated by the blockchain network's code of conduct and algorithms instantaneously generate the intended result [8]. Throughout the scenario, the rules are repeatedly asked to "decide" whether a transfer will be completed or if a party's rights under a smart contract would be instantly enforced. Nonetheless, in making this 'choice,' the scenario will often provide privileges to one side while removing them from the other group. In actuality, if the other party considers that the termination clause has not been honoured, it may opt to go to court; but, because the transaction is essentially anonymous, there is no means to prosecute the other party for monetary damages.

Because the participants in licenced blockchains are limited and readily identifiable by the network, it is easier to prove legal culpability. Disputes are easier to settle, and court judgements are easier to enforce. However, in the case of public blockchains, the anonymity of the transactions makes identifying the offender impossible, making it more difficult for courts to make a judgement.

#### **4. SUGGESTIONS FOR IMPROVING THE LEGAL REGULATION OF BLOCKCHAIN TRANSBOUNDARY PAYMENTS IN CHINA — GOVERNANCE**

Many of the sticky concerns that occur with blockchain applications, from network governance to legal responsibility, have been addressed. This article claims that one possible answer to networks' governance and liability difficulties is to push for the creation of an organisation of significant platform providers as well as finance agencies. By mandating uniform contractual agreements between members that explicitly describe governing legislation and assign responsibilities and liabilities, such a standardisation procedure and clarity of rules will considerably benefit the blockchain transaction market. In the case of licenced networks, key service providers and finance agencies must strictly manage network access, establish clear governance structures to control data access and use, adhere to relevant restrictions regarding the circle or territorial scope of users, and ensure non-discriminatory access. Furthermore, service providers should assure the software platform's

continuity and resilience through, but not limited to, harmonising internal rules controlling contract enforcement and access to rights with private law. In order to ensure system stability, service providers are also expected to make necessary enhancements to the software and offer suitable reporting systems to prevent platform flash failures and bubbles.

However, in the case of unlicensed public blockchain networks, additional government engagement is required to safeguard payment participants through a mix of explicit attribution of liability and other soft and hard rules on governance concerns. In the absence of express legislative measures, the notion of functional equivalence might be utilised to apply existing contract law in order to more seamlessly implement regulations and assist these laws to serve as essential clarity and protection for transboundary payment participants.

It is also important to note that authorities must constantly keep an eye out for the possibility of bifurcation in payment arrangements. The first danger is that payment protocols will evolve in unforeseen ways, resulting in modifications to the consensus algorithm or settlement process. The second concern is that by abandoning the payment protocol in order to join a branch, the number of possible validation nodes is reduced, thus weakening the consensus process. In all circumstances, authorities must closely monitor protocol development and strengthen their emphasis on openness. Furthermore, authorities should have backup plans in place in case the payment system diverges to an unfavourable version or a large number of users abandon the network. It is also advised that parties utilise business continuity plans to assure agreed-upon services so that varied levels of demand may be fulfilled even if one or more system components fail.

Lastly, with regard to the reduction in trade enforceability mentioned in the previous section, it is essential that policies and regulations are put in place by policymakers to secure equitable distribution and enforcement of liability in deals and contracts, as well as to ensure accountability and certainty in risk management in blockchain financial systems. Simultaneously, industry partners should collaborate to develop clear guidelines for the governance structure of blockchain deals in order to enable the seamless execution of varied blockchain deals. To summarise,

at the governance level, a combination of soft law, hard law, and private governance, as well as close cooperation among industry partners and equitable allocation of duties and liabilities, is required to assure these explicit criteria for governance and accountability are in place.

## 5. CONCLUSION

Fintech is a two-edged sword, and blockchain exemplifies both of its aspects. On the one hand, the use of blockchain in transboundary payments helps to minimise time and labour expenses, as well as conserve resources while increasing transaction efficiency. Online payment platforms, particularly those influenced by COVID-19, have become a popular option, with blockchain playing an essential role. However, the properties of blockchain itself offer a significant issue for legal control and may be readily used by criminals to carry out unlawful acts. Nonetheless, the benefits of blockchain to the economy and society exceed the drawbacks, and it has a wide range of applications. This study examines the barriers and constraints provided by blockchain in practice at the governance level, and then offers solutions based on the Chinese context. This includes optimising private governance in terms of governance and blending soft and hard in terms of legislation.

Finally, with the continuous advancement of blockchain, the application of blockchain in transboundary deals will be further developed in the future, with trends including but not limited to the overall optimization of smart contracts, intelligence, and regulatory procedure codification. This establishes stricter regulatory criteria in order to stay up with the times. This article intends to give lessons for improving China's regulatory strategy through a critical analysis of blockchain. It is hoped that Chinese officials would work to increase financial inclusion, embrace financial innovation, boost market dynamics, and fully capitalise on the good benefits of blockchain on the Chinese business and the global business.

## AUTHORS' CONTRIBUTIONS

This paper is independently completed by Xiangyu Chen.

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