

Research Using Blockchain to Strengthen Internal Control of the Companies

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Abstract

Seen as a technology that does not replace human activity, Blockchain plays a certain role in maintaining a controlled environment. This technology executes and records transactions with minimal human intervention, thereby providing evidence to help reduce errors and fraud. This means that Blockchain enhances visibility and increases accountability within the organization. However, Blockchain also has risks that an inexperienced manager can fall victim to. A decentralized Blockchain can lead to no authority being held accountable when something goes wrong. With so many new applications, organizations have difficulty finding qualified personnel or understanding them well. The article studies the role of Blockchain in managing the company in the most effective way. The results show that its application in enterprises plays an essential role, but confidentiality is also a fact of concern.

Keywords: Blockchain, difficulty, advantages, company

1. Introduction

The concept of "Digital Transformation" is often understood in the sense that the process of changing from a traditional business model to a digital one by applying new technologies such as Big Data, Internet of Things, cloud computing, etc. in order to change the operating method, leadership, working process, company culture [1].

As the world economy has been recovering from the COVID-19 pandemic, digital transformation plays an increasingly important role in the global economy [2]. According to research by Mastercard Vietnam, the pandemic is a catalyst to help develop a "digital is the default" mindset, helping to change consumers' payment habits. Accordingly, 60-70% of people in Southeast Asia have reduced the use of cash; 75% of Asia Pacific residents will continue to use contactless payments after the pandemic; 91% of people in the Asia-Pacific region have used contactless payments for COVID-19 safety reasons. McKensey's research results predict that by 2025, the impact of digital transformation on the GDP of the United States will be about 25%, with Brazil at 35%, and in European countries, about 36%. From here, it can be seen that the impact of digital transformation on GDP growth is very large.

In Vietnam, with a population of nearly 100 million people and rapid economic growth in Asia, a dynamic young population and rapid access to high technology, Vietnam is considered to have great potential in digital transformation [3]. This is a good opportunity for Vietnamese businesses to make a breakthrough in the market thanks to digital transformation. In 2020, the value of some domestic technology companies increased by about 200% on the Ho Chi Minh Stock Exchange. Ho Chi Minh City, including Digital World Joint Stock Company (Digiworld), a market development service provider; and Vien Lien, a telecommunications equipment business - increased by 252.1% and 189.4% respectively. (World Bank, 2021). In 2021, the revenue of digital businesses will still grow by nearly 10%. The ranking of Vietnam's e-Government development index has increased by 3 places compared to 2016.

The World Bank (2021) uses the Connectivity, Ownership, Innovation and Protection (CHIP) Framework to evaluate digital transformation based on four pillars: (1) The development of current digital infrastructure the payment network and payment network necessary to ensure a reliable and fast connection between users; (2) Harnessing these connections through developing the right skills for the workforce and strengthening the Government's capacity for state management of the new economy; (3) The benefits that digital technology brings; (4) Mechanisms to protect against breach and abuse of security in cyberspace

The analysis results according to the CHIP Assessment Framework show that, it is possible to compare the results of Vietnam with 2 groups of countries: (i) The group of 8 countries are similar to Vietnam, have middle income and consider transition digital transformation is central to the development strategy (Columbia, Ivory Coast, Indonesia, Mexico, Morocco, South Africa, Thailand and Tunisia); (ii) Group of 4 countries that are more advanced in economy and digital transformation (Korea, Malaysia, Philippines and Singapore).

2. Blockchain and its control activity

Blockchain makes for a faster risk assessment program, but organizations must also anticipate many of the risks associated with data. Traditional risk assessment focuses on the entity, while blockchain requires companies to take a broader view of risk, especially with stakeholders in the blockchain network [3].

According to COSO, organizations need to be on the lookout for fraud, such as compromised data or collusion. The amount of data can also be overwhelming for management and auditors to lack appropriate evidence if transaction audit trails are lost in the electronic environment.

In such cases, the organization should employ information technology professionals to assess how technology can be integrated with its existing structure; at the same time, update new regulations through legal advisors and internal departments [4].

A well-designed blockchain can enhance internal controls. The highly automated nature of blockchain can reduce the risk of traditional fraud, because it reduces human interaction. With real-time reporting, blockchain can also reduce untimely transaction processing.

The reliability of the underlying blockchain depends on the reliability of the underlying technology and business processes. A poorly implemented system can pose a wide-ranging risk. The consensus protocol of a blockchain sets the rules for transactions in the system, if the design and implementation are not suitable, the information recorded will be unreliable. In addition, if a member manipulates the consensus protocol or the organization engages in off-chain transactions, the information recorded is also unreliable [5].

To maximize benefits, organizations should address risk with new processes, paying special attention to key aspects of blockchain including: nodes, consensus protocol, private keys, and smart contracts

3. Some early warning of information flows

Blockchain increases the visibility of transactions and communication with management, such as through exceptional real-time financial reporting. At the same time, it also acts as a comprehensive shared database that serves as a platform for decision making. Shared ledgers can also prevent data loss and increase visibility into data management.

Even so, leaders should be wary of thinking the data is always accurate, that information will be available and the people involved have been contacted. Information on a blockchain is only as good as a standard input, and its reliability depends on how the process is built. Without proper input consideration, blind reliance on blockchain can be very dangerous. To prevent this risk, stakeholders should be trained on how to use blockchain in enterprises and warn early about the possibility of unreliable data. Leaders still have to set up an internal reporting system, while ensuring that communication between employees can keep up with blockchain operational changes. Communication with internal and external auditors should also be ongoing to ensure data is verifiable [6].

Real-time data collection and analysis helps organizations capture problems closer to when they occur, thereby detecting and resolving them in a timely manner. However, the sheer amount of data the blockchain stores can lead to information overload and pose challenges to adequate oversight. Even qualified personnel find it difficult to locate a proper monitoring system to install and maintain.

Therefore, computerized continuous monitoring techniques can help address information overload, mitigating the challenge. Regular reviews help ensure the functioning of internal controls. Agreements with outsourced service providers need to be closely monitored, because if untrusted data enters the blockchain from such sources, the integrity of the system can be compromised.

4. Status of digital transformation in the development of banking services in Vietnam

Over the past years, the financial-banking market has operated more and more healthy, safe and standard, the corporate governance model and risk control have been improved and gradually approached international practices such as the application of Basel II to the commercial banking system, has removed many difficulties and obstacles, supported the market, and created conditions for the development of financial services to adapt to the requirements of the banking sector.

The stock market was strongly restructured, although the number of securities companies decreased but increased sharply in size and quality, the divestment process of state-owned corporations and corporations continued to deploy. , the government bond and corporate bond markets have made significant progress. The above factors have contributed to promoting the growth of financial - banking - insurance services in the past period, meeting the needs of the market, increasing the coverage of financial services nationwide. financial inclusion goals.

In the context of digital transformation, the strong development of science and technology has brought significant impacts to banking, securities and insurance services, changing the behaviour of users of banking financial services as well as the operational

and operational structure of banks, securities and insurance companies. Digital transformation creates opportunities to change the face of banks, securities companies and insurance enterprises such as: reducing operating costs; improve service quality and increase safety and security [5].

In the securities sector, the use of blockchain technology (Blockchain) can help control transactions, the use of Artificial Intelligence (AI) can help to communicate with investors, market participants and new product development; while Internet of Things (IoTs) and big data (Big Data) technologies can help improve service quality and transparency in the securities sector. Many products and services have been upgraded and improved, helping to increase management efficiency and experience for businesses and investors.

In the insurance field, in the past 5 years, the life insurance market has achieved a high growth rate, from 25-30%. Insurance products are diversified with more than 450 products of all lines, meeting the insurance needs of more than 9.8 million policyholders. However, the investment in technology for the insurance industry is still somewhat inadequate, mobile applications are still at a simple level, not solving the big data requirements of the current insurance industry such as: Working from a huge amount of data to predict the needs of each customer group to build an appropriate product package [57].

In the banking sector, most Vietnamese banks have implemented digital banking at the level of transformation in terms of processes and communication channels, while a new data platform transformation has been implemented in some banks. Currently, Vietnamese commercial banks are quite active in digitizing their banking activities with two typical approaches. Military Commercial Joint Stock Bank focuses on enhancing customer experience, attracting customers by expanding interaction with customers through minigames.

Meanwhile, Techcombank is customer-centric, understands customer behavior, and focuses on digitizing operational and internal processes within the bank. The management of financial technology services is being adjusted in the direction of encouraging and facilitating development.

5. Some hidden problems regarding Blockchain

In addition to the opportunities brought by digitization, there are still many issues that need to be addressed to develop financial and banking services in the context of digital transformation.

Firstly, study and perfect the legal framework for the development and supervision of financial - banking services to meet the requirements of digital transformation. The application of new technologies, the formation of new transaction models and new financial services requires a revised and supplemented legal framework to suit these new models and services. The application of AI technologies in building algorithms also generates high-frequency transactions, and at the same time Big Data technology and mobile technology also give rise to new financial services such as investment analysis, trading via mobile devices, collect and analyze customer data, support compliance reporting, so the legal framework related to management and monitoring of high frequency transactions, data security is also an issue.

In the long-term, it is necessary to study and complete the legal framework for securities trading, payment and clearing when new transaction and payment models (such as payment through e-wallets, clearing and settlement) are required in the blockchain system through an algorithm) is formed through the application of technology. At the same time, expanding legal provisions related to information security and ensuring information security, due to the application of new technologies, new security holes will arise [6].

In the insurance field, a problem is needed to have an appropriate legal framework. In the context that new business models have been developed, traditional insurance businesses can combine with Fintech or Fintech enterprises [1]. Fintech start-up insurance business. Accordingly, when a start-up business wants to become an insurance enterprise with all insurance operations, the enterprise must have a charter capital that meets the requirements under the law on insurance business, in order to protect insurance participants and ensure the quality of business enterprises.

In addition, for automatic consulting services, the experience of other countries shows that along with the application of AI technology and the application of automatic consulting, the legal framework of other countries has also adjusted to suit the service. this new finance. In Vietnam, the current Law on Insurance Business currently regulates brokerage and insurance agency activities, while the new automatic consulting model can replace insurance brokers/agents, so in In the future, when insurance businesses apply these technologies to their business operations, the adjustment of legal regulations related to insurance consulting is also a problem [8].

In the banking sector, Fintech companies providing financial products and services such as peer-to-peer lending, crowdfunding, etc. have not been directly regulated by laws. Currently, the National Payment Corporation of Vietnam (NAPAS) is the exclusive channel for all payment transactions, while peer-to-peer lending is not subject to the law. As for digital assets (TSMH), there is currently no formal legal framework governing TSMH and related activities in Vietnam [3].

The regulations related to TSMH are scattered in a number of legal documents and only regulate the use of TSMH as a means of payment, replacing fiat money. Because TSMH has not been recognized as a legal means of payment, or property, or goods, etc., the application of tax or management policies as a security has no basis. For suppliers and technology companies, the lack of such a legal basis increases legal risks, causing these companies to seek other countries with a clear and safe regulatory environment for the development of financial services on the basis of ledger technology [3].

Second, improve infrastructure, information technology systems and research and apply new technologies. There have been many challenges in the process of deploying electronic public services (searching and providing information) on smart mobile platforms, upgrading some online public services from level 3 to level 3.4 on mobile technology platforms. In addition, there are challenges when applying blockchain technology such as: (i) Challenges from the fact that transaction information cannot be changed, any transaction recorded in the blockchain cannot be modified when there is a change. contract parameters or exceptions. The only way to correct transactions is to do a reverse transaction, however historical information in the blockchain database cannot be edited, which could affect subsequent transaction validation; (ii) Challenges in cash transactions, although blockchain technology allows a secure transaction to be paid in real time, the biggest barrier of this technology is the way cash transactions are processed. The digital currency has not yet received the support of all central banks globally.

Third, information security. Besides utilities, the application of new technologies such as blockchain, Big data also raises security problems. Blockchain technology allows each node/member in the network to keep a copy of the ledger that records the transaction history, so the problem in this model is security and privacy of the parties transaction may be compromised. Meanwhile, Big Data technology allows to collect, store, arrange and analyze all kinds of data such as markets, customers, transactions, risks, etc., information security is also an issue when apply this technology to the financial market with sensitive information and data about transactions.

Fourth, electronic transactions for online contracts and confirmation of electronic signatures. The Law on Electronic Transactions and its guiding documents do not specify details for electronic transactions related to online contracts, which is also a problem. In 2018, Vietnam promulgated the Law on Cybersecurity, but the scope of the Law is limited to activities of protecting national security and ensuring social order and safety in cyberspace and the responsibilities of agencies. , related organizations and individuals, without mentioning a number of issues related to financial services such as: (i) Regulations on data control and processing when performing outsourced contracts ; (ii) Regulations on cross-border data transfer; (iii) Regulations on reporting breaches related to personal data; (iv) Regulations on storage time related to the purpose of data use [4].

Another issue is the foundation for technology application services to work, which is the recognition of electronic signatures of organizations and individuals in electronic transactions. In Vietnam, the verification of electronic signatures is still limited, so the application of electronic transactions to online contracts (especially insurance contracts) is still difficult. Enterprises still have to take the step of meeting customers face-to-face to get signatures on insurance claims and issue printed insurance policies to customers [7].

Fifth, build a trial legal framework (sandbox) for the application of technology in the field of financial and banking services. With new technologies comes risks, such as Blockchain technology, which, despite its many advantages, still presents challenges regarding immutability, the use of cryptocurrencies or the legality of a contract. Blockchain-based intelligence is ambiguous. In order to limit the risks of technology, international experience shows that Vietnam needs to build a legal framework for technology development in the banking and finance sector, to know the successes and failures when applying technology into this industry, and at the same time contribute to ensuring fairness between enterprises participating in the market [6].

5. Conclusion

The banks, securities companies and insurance companies face many challenges in providing digital financial services and changing business models, products and services, product distribution channels, and preparing large financial resources to adapt to the trend of high technology application in digital products and services. The problem is that organizations providing digital services must have a shift in their business models, creating consistency in their governance models, digital transformation action plans and implementation methods on the basis of digital transformation and potential risks in the transformation process.

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