Research on Financial Innovation Strategy Based on Investment Theory in Digital Economy Era

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Abstract. By analysing the current situation of financial innovation in the era of digital economy, this paper gives the financial innovation strategy based on the principles of investment science from three aspects: investment in digital assets, investment in fintech enterprises, and innovation in digital financial services, and analyses them in combination with typical cases such as Bitcoin investment and Ant Group. It is found that financial innovation in the era of digital economy is a systemic change, and investment needs to take into account the diversified portfolio and dynamic valuation model, while paying attention to the policy risk. In terms of regulation, an intelligent and standardised regulatory system should be created and cross-border regulatory synergy should be strengthened; in terms of talent cultivation, composite digital asset professionals need to be nurtured to promote the healthy development of the industry.

Keywords: digital economy; investment principles; financial innovation; digital assets; financial technology

1 Introduction

The wide application of digital technologies such as cloud computing, big data, blockchain and so on has given rise to diversified financial innovation forms, from the rise of digital currency, to the flourishing development of financial technology enterprises, to the comprehensive innovation of digital financial services, financial innovation in the era of digital economy has become the focus of attention of the academia and the industry. Traditional investment principles have been widely used and verified in the industrial economic era, but the financial market in the digital economy era has a high degree of complexity and innovation, with significant changes in asset forms, transaction models and market participants [1]. In this new environment, the traditional investment strategy is difficult to adapt to the rapid changes in the market, and there is an urgent need to explore new financial innovation strategies based on the principles of investment science, combined with the characteristics of the digital economy era.

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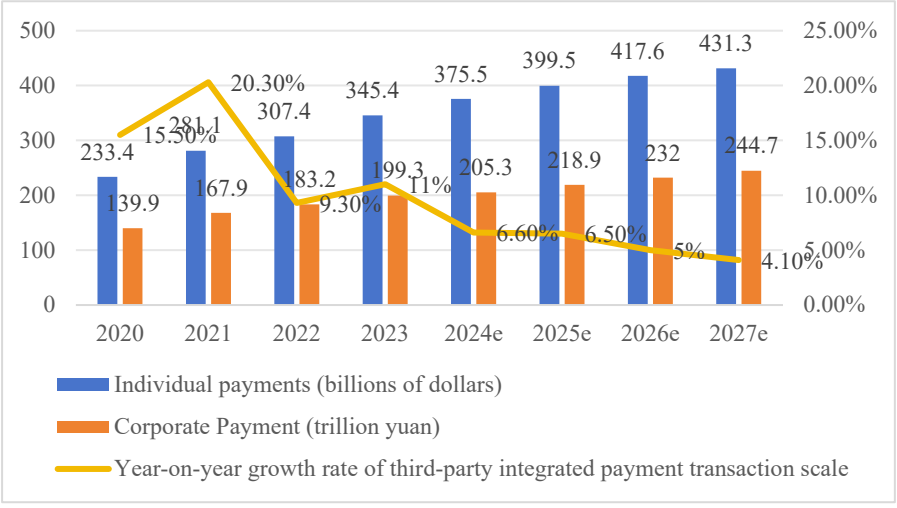
1.1 The Current Situation of Financial Innovation in the Era of Digital Economy

In the era of digital economy, financial innovation presents a multi-dimensional development trend [2]. In terms of technology application, cloud computing, big data and other financial technologies are widely used to help financial institutions build online service platforms and accurately analyse customer data. In terms of service scenarios, mobile payment has revolutionised the consumer payment experience, and supply chain financial services have been accurately empowered by digital technology. Meanwhile, in the era of digital economy, the diversification of the main players in the payment and settlement industry has increased market vitality and improved market efficiency. In the past, the banking industry was the market main body of the financial industry to play the function of payment and settlement, however, with the development of the digital economy, Internet enterprises, e-commerce platforms, large financial technology companies began to participate in the payment and settlement business, and its scale gradually increased, and the growth rate in recent years has gradually stabilised. Take the data in Figure 1 as an example. The scale of personal payment gradually increased from 233.4 in 2020 to the projected 431.3 in 2027. The scale of enterprise payment increased from 139.9 in 2020 to the projected 244.7 in 2027. Meanwhile, the year-on-year growth rate of the transaction scale of third-party comprehensive payment changed from 15.50% in 2020. It reached 20.30% in 2021, fluctuated in the following years, and is expected to be 4.10% in 2027, highlighting a gradually stabilizing growth trend. On the whole, digital technology is profoundly changing the operation mode of the financial industry and promoting the continuous innovation and development of the industry.



Data source: Avery Consulting

Fig. 1. China's Third-Party Comprehensive Payment Transaction Size and Structure, 2020-2027

2 Analysis of Financial Innovation Strategies Based on Investment Principles

2.1 Digital Asset Investment Strategy

According to modern portfolio theory, diversified investment can reduce unsystematic risk, and investors can include digital assets in their investment portfolio to build a better risk-return investment portfolio. In the specific operation, investors need to value digital assets. In the case of bitcoin, for example, in addition to its mining costs, it is also necessary to consider factors such as network arithmetic and market acceptance. In addition, the price fluctuation of bitcoin is greatly affected by market sentiment, and investors can analyse the market sentiment and grasp the investment timing by observing the number of active addresses, transaction amount and other on-chain data. Furthermore, investors should pay attention to the changes in the regulatory policies of digital assets and adjust their investment strategies in time to avoid policy risks.

2.2 Investment Strategy for Fintech Enterprises

To invest in fintech enterprises, investors should first evaluate the business model of the enterprise. Taking Ant Financial Services as an example, it has built an ecosystem covering payment, wealth management, credit and other diversified businesses with Alipay as the core, and this powerful network effect has brought it sustained growth momentum. Second, technological strength is the core competitiveness of fintech companies, and investors should pay attention to the R&D investment and technological achievements of companies in the fields of big data, artificial intelligence and blockchain. For example, some enterprises have reduced credit default rates and improved operational efficiency by using artificial intelligence technology to optimise risk control models.

In addition, based on the theory of enterprise life cycle, the investment strategies of fintech enterprises at different stages of development are different. Start-up enterprises have high growth, but the risk is also relatively high, investors can participate through venture capital; growth stage enterprises business model is gradually mature, profitability is enhanced, you can consider investing through the open market [3].

2.3 Digital Financial Service Innovation Strategy

Digital financial service innovation should be customer demand-oriented, and personalisation and intelligence of services should be achieved with the help of financial technology. In terms of customer segmentation, financial institutions can use big data analysis technology to classify customers into different groups based on their age, income, investment preferences and other dimensions, and provide them with customised financial products and services. For example, for young investors with high risk appetite, they provide digital currency investment portfolio services; for prudent investors, they launch smart deposit products [4].

In terms of service channel innovation, financial institutions can leverage emerging channels such as social media and smart terminals to expand the reach of their services. Taking mobile banking APP as an example, it provides customers with convenient one-stop financial services by optimising interface design and enriching functional modules. At the same time, the use of artificial intelligence customer service, to achieve 7×24 hours online service, timely response to customer inquiries, to enhance customer experience.

3 Case Studies

3.1 Digital Currency Investment Cases

In recent years, Bitcoin, as a typical representative of digital currencies, has been characterised by a significant coexistence of investment value and risk. When the price of Bitcoin was $6,500 in March 2020, institutional holdings were only 21,000. With the global quantitative easing policy pushing institutional investors to enter the market, for instance, MicroStrategy has cumulatively purchased 140,000 Bitcoins (with an average cost of $35,700). Tesla purchased 48,000 Bitcoins (with an average price of $32,000) in two installments. By April 2021, the price had reached $63,000, and the institutional holdings rose to 386,000. These holding behaviors profoundly affected the market structure. In 2021, the proportion of institutional trading volume jumped from 12% in 2019 to 63%. When the price was $42,000 in March 2024, the institutional holdings had reached 1.023 million. However, in 2022, the market entered a bear market, with the price of Bitcoin once dropping to $16,000. MicroStrategy suffered a floating loss of up to 55%, but eventually recoup its investment through long-term holding, highlighting the importance of cost control and long-term strategies. As shown in Table 1:

Table 1. Correlation between Bitcoin Price and Institutional Positions (2020-2024)

Time Node	Bitcoin Price	Institutional Positions (10,000)	Data Source
2020/03	$6,500	2.1	Analysis of digital currency investment returns and related case studies
2021/04	$63,000	38.6	Analysis of digital currency investment returns and related case studies
2024/03	$42,000	102.3	CoinShares

3.2 Investment Cases in Fintech Companies

Ant Group's IPO termination is a landmark case of the shift in fintech regulation. Its valuation plummeted from US$315 billion in 2020 before the IPO to US$78 billion in

2023, mainly due to a 47 per cent increase in customer acquisition costs as a result of China's regulators increasing the ratio of own funds for joint loans from 2 per cent to 30 per cent and implementing a 'direct linkage' policy. The business structure was adjusted accordingly. The proportion of digital payment revenue rose from 43% in 2019 to 51% in 2023, with a compound annual growth rate of + 6.2%. The proportion of credit technology income dropped from 35% to 23%, with a compound growth rate of -12.4%. The revenue of insurtech increased by 34.1% due to the expansion of scenarios. As shown in Table 2:

Table 2. Changes in Ant Group's business structure (2019-2023)

Business Segments	2019 Revenue Share	2023Revenue Share	compound growth rate (esp. in economics)	Data Source
Digital Payments	43%	51%	+6.2%	China Digital RMB Industry Risk Assessment and Investment Trend Research Report 2024-2030
Credit Technology	35%	23%	-12.4%	China Digital RMB Industry Risk Assessment and Investment Trend Research Report 2024-2030

4 Conclusions and Recommendations

4.1 Conclusions

In the era of digital economy, financial innovation has evolved from the application of technological tools to systemic change, the core of which lies in the deep integration of investment science principles and digital technology. Research shows that digital asset investment strategies need to take into account diversified portfolios and dynamic valuation models, and institutional investors can effectively cope with market volatility through long-term holdings and on-chain data analysis, but policy risk is still a variable that cannot be ignored (e.g., Bitcoin's regulatory policy changes have led to the migration of arithmetic across the network). The valuation logic of fintech companies, on the other hand, has shifted from user scale to technological barriers and compliance capabilities, and the case of Ant Group's valuation shrinking by 78 per cent due to regulatory tightening suggests that policy adaptability has become key to the company's survival. In addition, digital financial service innovation has significantly improved financial inclusion through big data-driven customer segmentation and intelligent channel expansion, but technical vulnerabilities (such as DeFi cross-chain bridge attacks) and privacy issues still require systematic solutions.

From the perspective of investment science, the core contradiction of financial innovation is reflected in the game between technological innovation and risk management.

Institutions' large bets on digital assets in the context of quantitative easing have pushed up the market heat in the short term, but the trading strategy that overly relies on market sentiment is prone to triggering systemic risks (e.g., the price of bitcoin will be cut in 2022). The life cycle characteristics of fintech companies require investors to differentiate their layout: start-up companies rely on risk capital to support technology development, while growth stage companies need to achieve valuation reshaping through compliance reforms.

4.2 Recommendations

Build an intelligent and standardised regulatory system.

Regulators should build a 'penetrating' digital governance system and use regulatory technology to monitor chain transactions and fund flows in real time. Develop a distributed ledger regulatory platform that uses graph database technology to map the flow of funds and make transaction paths visual, making it easy to identify clusters of suspicious transactions; a built-in rules engine that automatically detects smart contract code and examines whether it contains prohibitive clauses; and based on machine-learning models, predicts the trend of abnormal cross-border flow of funds, and issues a warning in a timely manner [5].

In terms of improving accounting standards for digital assets, a three-tier classification and measurement system is constructed. In terms of basic classification, digital assets are divided into currency classes, such as stable coins; equity classes, such as platform tokens; and commodity classes, such as bitcoins. In terms of measurement, digital assets in active markets are measured at fair value, inactive markets are measured using the cost method, and complex derivatives use discounted expected cash flows. In terms of disclosure requirements, companies are required to disclose information such as position details, quantitative analysis of risk exposure and valuation model validation reports. At the same time, a 'three horizontal and three vertical' cross-border regulatory coordination network has been established, horizontally connecting the regulatory information sharing platforms of the central bank, the CBRC and the foreign exchange bureau, and vertically constructing an international regulatory alliance to carry out mutual recognition of cross-border regulatory sandboxes, real-time exchange of information on suspicious transactions, and coordination of regulatory policies.

Cultivate Composite Digital Asset Professionals.

A 'pyramid-type' talent cultivation structure should be established within the enterprise. At the basic level, popularise digital literacy courses, such as blockchain fundamentals and smart contract principles, to enhance employees' digital knowledge; at the advanced level, open special skills workshops, such as on-chain data analysis and derivatives pricing models, to cultivate employees' professional skills; and at the expert level, set up a 'digital innovation lab' to carry out cutting-edge technological research, such as the cross-chain interoperability protocol development, and promote technological innovation of enterprises. Drawing on the 'Internet Marketer' certification system

of the Ministry of Human Resources and Social Security, we have established the 'Blockchain Application Engineer' certification in the field of digital assets, which requires a real-world assessment of smart contract development to enhance the practical ability of employees.

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