

Application of Fintech Financial Technology in the Stock Market in Vietnam

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Abstract

Along with the strong development of science and technology, the application of modern technology in many activities in the financial market, including the stock market, has contributed to promoting and creating new steps. a major turning point in the development and integration of these markets. The application of modern technology has created technological leaps in the financial sector around the world, bringing incredible changes in the fields of securities, banking, and investment. Currently, Fintech is playing an important role in changing the way investors participate in the stock market.

The profound impact of the 4.0 Industrial Revolution is and has been taking place strongly on most industries around the world in general and Vietnam in particular, so the stock market is no exception to that trend. Developing the stock market towards integrating modern information technology applications is an inevitable trend. Recognizing the importance of information technology application in the field of securities and stock market, the State Securities Commission has gradually modernized the technology platform to improve management and supervision capacity, operating and serving the development of the market.

Regarding the development of securities products and services, since 2017, a number of securities companies have researched and deployed financial technology applications to increase customers' investment experience. Up to now, Fintech has helped new investors easily access stock investment channels with many convenient trading features, low costs, saving time and effort. However, Fintech applications in stock trading in our country are not really diverse, still at a simple level such as supporting buying and selling transactions, providing transaction information for investors. The article provides comments and assessments on the current status of Fintech applications in stock trading in Vietnam and some proposals to widely deploy these applications in the stock market in the near future.

Keywords: Fintech, Stock trading, Stock market

1. Ask the Problem

The Fourth Industrial Revolution has been a new trend, strongly impacting the socio-economic development of each country, each region and globally.

The stock market is a high-level financial market, connected and reacting very quickly to developments in the domestic and world economy, so the 4.0 industrial revolution takes place globally. is affecting the capital market and Vietnam's stock market in many aspects and this is considered an inevitable trend in the new era.

Because it is aware of the important role of modern information technology applications in the field of securities, the State Securities Commission has made efforts to synchronously deploy modern information technology applications and infrastructure. to improve management, supervision and administration capacity, contributing to creating an effective, open and transparent market and in accordance with international practices. After a decade of rapid technological development, information technology in the financial industry in general and the securities industry in particular is facing new opportunities and challenges of the 4.0 Industrial Revolution, which has been progressing very quickly. with the combination of technology in the fields of physics, digitalization and biology, creating completely new possibilities and having a profound impact on society and the economy, including the US stock market. Vietnam in particular and the world in general.

2. Current Status of Information Technology Application in the Field of Securities and Stock Market

Vietnam's stock market went into operation on July 28, 2000. Up to now, after more than 18 years of development, it has made many important contributions in mobilizing medium and long-term capital for socio-economic development. of the country. In the early days of stock trading, investors who wanted to buy or sell securities had to go directly to the stock exchange and write a trading order so that the securities company could call the unit representative located at the Stock Exchange Center to Entering into the trading software system is still manual. Today, investors anywhere can trade stocks themselves through the trading software systems of securities companies that connect directly to the trading system of the Exchange. stock.

To implement important goals in the Vietnam Stock Market Development Strategy, The Prime Minister and the State Securities Commission have gradually modernized information technology, applying many important information technology systems to support and improve state management of securities and securities. Supervise stock market activities. Typically: Develop policies in the field of information technology management; Build and deploy core information technology application systems, database management systems, and public services; Modernize technical infrastructure to deploy information technology application systems...

2.1 Fintech Securities Field

The role of Fintech in the securities sector Fintech has been known for the past decade.

Fintech creates technological leaps in the financial sector around the world, bringing incredible changes in the fields of securities, banking, and investment. Currently, Fintech is playing an important role in changing the way investors participate in the stock market.

The 4.0 industrial revolution shown in the securities sector is built on the basis of financial technology innovation. These changes do not only come from management agencies but start from within businesses, financial services companies rely on financial technology platforms to modernize transaction infrastructure and improve products and services.

2.2 Provide Complete and Quick Data to Support Investment Decision Making

Some Fintech companies provide services to investors such as user-friendly artificial intelligence (AI)-based investment platforms that help investors manage their investment portfolios in a timely manner. given profit and risk goals. In addition, some investment applications also provide free basic stock trading activities, real-time and continuous personal financial news updates during the investment process. It can be seen that the application of modern technology has created a more level playing field for all investors in the stock market.

In the past, organizations and professional investors often had the opportunity to access complete information to support wise decision-making. There are a number of organizations that have provided rich data services, with data provided directly, updated, and completely. However, this source of information is often not available to the majority of investors on the stock market. Because of this, for a long time, the stock market is still considered the most risky market in the financial sector.

Currently, with the participation of Fintech, the current status of access to information on the stock market has changed, rich data and free access from investment platforms help investors easily access a lot of information to make decisions transaction. Fintech changes the stock market by using big data analysis technologies (Big data), AI and machine learning (Machine Learning) to provide data to investors within seconds. At the same time, investors can practice virtual and real trading on free investment education platforms. Previously, trading based on algorithms and technical chart analysis was accessible to only a few investors, but now, with programmable trading applications (APIs) of Fintech brokers, the ability to Accessing these services has become easy for investors

Simplifying the investment process Fintech helps simplify the stock investment process through introducing and providing stock buying and selling services on its platforms. Investors just need to choose a suitable investment goal, ensure a balance of money or stocks in their account, financial technology platforms will perform transactions with just a few taps or swipes of the screen of smart devices. Streamlined trading processes help users invest faster, easier, and more economically cost savings.

Fintech companies in the investment field apply and deploy ML, chatbots and AI to create robo-advisors that can analyze big data and provide personalized investment advice. Users can receive quick answers about content such as investment value, investment methods and specific investment portfolios suitable for their investment goals. Today, Fintech-based

brokers apply AI and ML to their operational processes including: introducing customers, guiding customers to trade, and advising customers on transactions in just one time. short period of about a few minutes.

In stock exchange, Fintech is applied in many different ways such as automated advisors (Robo-advisors), trading robots (Robot trading) and self-investing tools (self-investing tools).

Robo-Advisors are online applications that take on the role of advisors for wealth managers. These advisors will use algorithms to calculate and select investments based on customers' expected profit goals and risks. Management costs for robo-advisors are lower because they can spread portfolio management costs across multiple clients at the same time and don't have to interact as much with clients. However, these robo-advisors often provide predetermined advice according to a certain pattern without being as flexible as asset managers.

Trading robot, also known as stock trading robot. The robot will be programmed based on AI and ML technology to find stock buying and selling points. The robot's input data is usually time, price, transaction volume... allowing investors to proactively set investment strategies, thereby eliminating emotional factors when trading. The biggest advantage of Robot trading is the accuracy in trading. The robot will automatically identify price levels according to actual trading time, eliminating the risk of operational errors during the order placement process. However, Robot trading also brings some risks when it does not use much basic information about the business and macro information when making trading decisions.

Self-investing tools are investment tools and platforms that help investors make their own investments. These platforms help investors proactively make trading decisions when they see fit without needing advice or support from any consultants. Sometimes, they can also manage their investment assets themselves on these platforms. In addition, investment platforms also allow investors to trade automatically through computer algorithms. This brings several benefits to investors such as more efficient trading, lower costs and better market access. Depending on the level of Fintech development in each country, Fintech applications in the securities sector are deployed at a simple or complex level. But there is one common thing that is easy to see: Fintech has created a new look for the stock market, helping investors easily access investment activities.

In the context of technology 4.0, the race to invest in technology at securities companies is fiercely competitive. Due to the characteristics of the technology system in the financial market changing rapidly, to ensure competitiveness in the market, securities companies are focusing on investing in technology and applying technology in operations in the direction of modernization, many utilities to maximize the diverse needs of customers and investors. Currently, the services that Securities Companies in Vietnam provide are mainly stock exchange software and some automated advisors in the form of chatbots.

2.3 Securities Trading Activities

In stock trading activities, Fintech is gradually being applied to provide investors with new, more convenient and easier experiences when investing. Two outstanding activities related to

stock trading that are currently receiving support from Fintech are opening accounts using eKYC electronic user identification technology and integrated stock trading software. investment consulting services.

Applying eKYC in account opening activities for customers In 2021, Vietnam's stock market recorded a record increase in the number of registrations to open new trading accounts of investors. Along with the excitement of the market, the application of eKYC electronic user identification technology helps the number of investor accounts in the market increase rapidly. Investors can easily create a stock trading account with just a few simple steps on their smartphone.

eKYC (Electronic Know Your Customer) allows organizations and businesses to verify customer identity 100% online, simplifying document verification procedures and biometric verification without needing to be present in person like KYC traditional. Securities is one of the pioneering industries to apply eKYC to opening trading accounts for customers. Some pioneering securities companies apply eKYC technology for account opening services such as SSI Securities with FPT.AI artificial intelligence platform for high accuracy and security along with a simple implementation process. By 2021, most large securities companies on Vietnam's stock market have applied eKYC technology to the account opening feature on trading software such as: MBS Securities Company, VNDirect Securities Company, VPS Securities Company, Securities Company, TCBS...

After a period of application, some securities companies are now also applying other modern technologies, integrating the account opening process via eKYC to help secure customers' accounts and perform increasingly quickly. such as: AI platform, OCR technology - optical character recognition allows identification and extraction of information from identification documents, facial recognition technology - Face matching, real person detection technology - Liveness detection helps Identify and compare information and images, ensuring high accuracy, completely replacing face-to-face customer meetings such as traditional KYC, biometrics - Biometrics with the ability to recognize faces and images, sound...

2.4 Online Trading Software

In recent years, Fintech has opened a new direction for individual investors. Investors can now open their own accounts, trade and receive advice on asset allocation and management proactively thanks to Fintech applications.

2.5 With Trading Software

Currently provided by securities companies, many outstanding features are currently integrated into trading applications such as: Trading all types of securities (stocks, bonds, derivatives, certificates fund...) easily and quickly, choose a tracking portfolio, a flexible investment portfolio; Clear property information; allows trading with small amounts of capital through splitting orders by value instead of trading lots; Providing added services such as mortgage, escrow,

Online deposit, advance sales, technical chart analysis support; The set screens stocks

according to many criteria, suitable for many types of investors, warns and monitors fluctuations in stocks...

It can be seen that, thanks to the application of technology in general and Fintech in particular, current trading software helps investors place orders easily, without limits, the ability to integrate technical charts, and the ability to set alerts. timely, accurate and effective risks to users. At the same time, business news that is continuously updated on the software also helps investors make more accurate decisions.

2.6 Stock Trading Robot

Stock trading robot - Robot Trading is a new form of investment in Vietnam

This is considered an easy and time-consuming way to invest. Investors will use available programs to find buying and selling points according to previous settings. This will help investors eliminate emotional factors when trading. In Vietnam, a number of Fintech companies have launched trading robots based on modern technologies and provide automatic investment features for customers. Besides some securities companies that have invested in building robot trading systems, many Fintech companies have also developed their own robot trading systems for the purpose of leasing, or selling the system directly to customers. customers (Stocktrader, Finbox, Finshark...). If Robo Advisors are deployed and integrated into stock trading software by securities companies, without charging additional fees to customers, trading robots often require customers to pay a monthly usage fee or year. Using trading robots will help investors save time and avoid following the crowd. However, robots also have some disadvantages such as not paying attention to the intrinsic value of the business when making recommendations. The robot will only be effective when the market trend is clear. If in a sideways state, the robot will give continuous buy and sell signals, causing investors to change positions, leading to risks in transactions. Trading operations are also limited due to the programmer's algorithm.

2.7 Stock Investment Consulting - Robo Advisor

Since 2015, a number of securities companies in Vietnam have launched plans to develop smart applications capable of replacing humans in securities investment consulting activities. To date, Robo Advisor products have been launched and deployed at a number of large securities companies. Robo Advisor is considered a robot advisor suitable for the choice of young investors, helping to bridge the gap between investors and the stock market. Robo Advisor has been deployed at many securities companies with automatic advisory features according to the risk appetite of each individual investor. Famous Robo Advisors on the Vietnamese stock market include: TCwealth, Smart Robo, iBroker, YSwealth...

TCwealth - The first Robo Advisor developed in Vietnam. TCwealth was developed by TCBS Securities Company, the complete version was launched on the market in 2017. This is an online personal financial consulting tool, building financial and investment plans suitable to specific goals. possible future of investors. A special feature of TCwealth is that it is free to use for investors. TCwealth uses TCBS's product portfolio to provide optimal investment solutions according to customer needs.

Smart Robo - Robo of VPS securities company launched in 2018 is expected to bring a new experience to customers of the securities company. This is considered the first automated advisor for trading activities in Vietnam (previously TCwealth focused on consulting and building personal financial plans). Smart Robo can interact with customers on many chat platforms such as Skype, Facebook, and securities company websites. In addition, VPS's Robo can support account management and stock trading by analyzing behavior, investment appetite and devising appropriate trading strategies. However, in the beginning, the robot can only answer basic information, some customer requests cannot be met. After a while, the robot will self-learn and improve its understanding to better meet customer needs.

iBroker - Robo of BSC Securities Company was introduced in early 2019 as a comprehensive investment consulting system including functions: quantitative analysis (providing intraday technical signals and recommendations), fundamental analysis (providing information about business operations), analytical reporting (providing analytical reports and recommendations from securities company experts), derivative analysis (technical recommendations for securities companies) futures contracts), warrant analysis (providing basic information about warrants and Black-Scholes valuation).

YSwealth - the asset management tool of Yuanta Vietnam Securities Company (YSVN) launched in August 2022, supports investors in managing and allocating assets based on risk "appetite" for each individual. YSwealth recommends buying and selling a portfolio of stocks including stock code, capital allocation proportion and recommendation time, eliminating emotional bias in the decision-making process. For small individual investors or newcomers to the stock market, YSwealth is like a "financial advisor" that helps them conveniently manage assets. It can be seen that Robo Advisor is increasingly receiving attention and being put into application by many securities companies to increase service quality, reduce personnel costs and best meet the needs of each customer. In reality, it's hard to compare

The ability of a Robo Advisor to work and a traditional advisor because the consulting results are different. However, Robo Advisor is still providing opportunities to access and experience the stock market at the lowest cost for many investors.

Besides the results achieved when securities companies applied Fintech to their services in recent times, there are still some limitations that can be mentioned such as: Firstly, the legal framework for the operations of Fintech companies and Fintech application activities in stock transactions is not complete. In the investment field, the activities of Fintech companies are new and do not yet have a complete legal framework, thus posing great risks to market participants. Second, Fintech applications in stock trading in Vietnam only stop at helping users perform simple trading activities, supporting users in asset management and asset allocation like experts. traditional. In addition, technology application at Vietnamese securities companies mainly focuses on providing added utilities for brokerage activities. Third, Fintech investment will require a large amount of money from securities companies. Some large securities companies with financial potential will proactively deploy Fintech services. However, many securities companies do not have much funding to invest in technology in their operations. Along with that, personnel in the field of information

technology at securities companies are currently lacking. There are only a few securities companies qualified to build their own trading software as well as deploy Fintech application products and services.

3. Some Suggestions

Based on the current status of Fintech application in stock transactions in Vietnam, the author has some proposals to eliminate limitations and promote Fintech application in stock transactions.

3.1 On the State Side

Firstly, Complete legal regulations for the management and use of information technology applications in the securities sector. In this field, there have been many clear changes in the application of information technology in market management and operation, in addition to products applying information technology in investment and consulting activities such as Robots. Automatic investment, investment recommendation applications using information technology platforms, have been accepted by investors. Besides the advantages that help investors, there are also consequences regarding responsibility in handling possible disputes, so the law needs to have specific regulations to monitor the above activities. Along with building a legal corridor for Fintech activities in the fields of Finance - Banking in general, the Ministry of Finance and the State Securities Commission need to soon issue specific regulations for management, Supervise and guide stock trading activities through software with Fintech applications. Regulations need to be specific to each service provider and each type of service. There needs to be separate management between the service provider, the Fintech company, and the securities company. In particular, for Fintech companies, there needs to be an implementation roadmap and effectiveness testing and evaluation after each implementation phase.

Second, develop a specific roadmap for integrating information technology application systems of the State Securities Commission. From the established information technology and database application systems, it is necessary to continue to build and develop to form a large-scale, core application system of the State Securities Commission. industry-wide and highly integrated. Therefore, the construction and development of information technology application systems need to fully meet the requirements of state management of securities and the stock market, improve the quality of service to people and businesses, aiming to ensure the provision of data information for the national database on finance and budget located at the Ministry of Finance so that relevant units under the Ministry can exploit and use effectively.

Third, Complete information technology infrastructure and enhance safety and security solutions, ensuring deployment and operation of large information technology application systems and database systems The core of the State Securities Commission follows a modern and unified direction.

Fourth, apply new technologies to flexibly respond to changes in business processes. When building and developing information technology systems, it is necessary to focus on survey,

analysis and system design. The construction system must meet current user requirements but also easily accommodate updates and changes when necessary.

Fifth, for intermediaries participating in the stock market, it is necessary to quickly change according to the development trend of the times, providing information technology applications in stock trading and trading activities. investment consulting.

Sixth, for securities practitioners, especially stock brokers. Due to the inevitable development trend in the securities industry, it will gradually replace traditional desk-based investment consulting brokers towards integrating technology in investment consulting activities. Therefore, in addition to working at the unit, brokers also need to build online brokerage channels such as participating in Social Invest to affirm the quality of investment consulting, thereby finding potential customers.

3.2 On the Side of Securities Companies and Fintech Companies

Firstly, in addition to building a legal framework to manage and monitor Fintech application transaction activities, regulators also need to encourage securities companies and Fintech companies to continue to research and deploy new product with many trading features. Special attention should be paid to encouraging wealth management activities, this is one of the activities with a high level of Fintech application and is popular in world stock markets but is very new in Vietnam. In the first phase, the State Securities Commission may allow qualified securities companies and Fintech companies to register to participate in Sandboxes on asset management based on Fintech applications (WealthTech), then implement currently testing and evaluating operational efficiency before allowing deployment across the market.

Second, to accelerate the implementation of Fintech applications in stock transactions, securities companies can also consider acquiring products or cooperating with Fintech companies that are implementing services. The combination of two entities providing securities trading services and providing modern Fintech platforms for investment will shorten the time to deploy new products on the stock market.

Third, securities companies need to develop a strategy for human resources in the information technology industry and a strategy for capital resources to invest in developing securities products and services applying Fintech. In the current context of continuous development of Fintech, securities companies will compete in products and services that bring many conveniences to customers. Therefore, securities companies need to have a specific plan to deploy new products and services in the near future, thereby building appropriate capital and human resources strategies.

Fourth, on the investor side, especially new investors participating in the stock market, need to equip themselves with basic knowledge about trading and investing. You should not rely too much on the trading software available from securities companies. Even building your own investment strategy must be based on basic knowledge of financial investment. Products such as Robot trading or Robo Advisor help us trade conveniently, quickly and cost-effectively, but are not tools to replace investment decision making to achieve high profitability. In addition, investors also need to learn about trading software and should

choose reputable service providers approved by management agencies. It is necessary to avoid unnecessary risks when conducting transactions through software that is not licensed to trade by the State Securities Commission.

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