

Survey and analysis of the public knowledge of new financial technologies (fintechs) and expectations in this area

Kamyar Monokchian Sharifabad

PhD Student in Financial Engineering - Islamic Azad University, Roodehen Branch

Submit: 05/11/2020 Accept: 10/02/2021

Abstract

Higher growth and further economic development of the country is necessary in the current situation. Increasing the efficiency and effectiveness of most activities, especially in the financial field can be a good basis for this growth and development. Fintechs in developing and upgrading financial services can reduce costs, increase speed, make more informed decisions, gain access to new data, and gain a deeper understanding of customers and markets. In this study, we seek to evaluate the extent to which society is aware of new financial technologies (fintech) and assess the expectations in this area. The results of this research can be used as a basis for issues related to fintechs and technologies related to financial services.

Keywords

FinTech, Financial Technology, Financial payments, Insurance, Deposits & Lending, Capital Raising, Investment Management, Market Provisioning.

1. Introduction

Financial technology (abbreviated fintech or FinTech) is the technology and innovation that aims to compete with traditional financial methods in the delivery of financial services. It is an emerging industry that uses technology to improve activities in finance. The use of smartphones for mobile banking, investing, borrowing services, and cryptocurrency are examples of technologies aiming to make financial services more accessible to the general public. Financial technology companies consist of both startups and established financial institutions and technology companies trying to replace or enhance the usage of financial services provided by existing financial companies.

New financial technologies with the use of various sciences such as blockchain technology, machine learning, biometrics and cloud computing will cause a great change in the field of financial services. These technologies can cause significant changes in financial markets and the behavior of investors in these markets. Benefiting from the opportunities of new financial technologies will lead to higher growth and further economic development of the country .

In addition to being an effective factor in economic growth and development, fintechs also lead to entrepreneurship, upgrading the level of knowledge and technology in the country and job creation.

Given the current situation, more economic growth and development of the country is necessary and increasing the efficiency and effectiveness of more activities, especially in the financial field can be a good basis for this growth and development, and given the role of fintechs in development and promotion. Financial services that can reduce costs, increase speed, make more informed decisions and access to new data and deeper understanding of customers and markets; In this study, we seek to examine the extent of public awareness of new financial technologies (fintech) and expectations from this area to the results as a basis for deciding on the required infrastructure and factors affecting the creation and development of fintechs, Market research should be used in relation to their services, expectations of their services and the

type of impact expected. In addition to being an effective factor in economic growth and development, fintechs also lead to entrepreneurship, upgrading the level of knowledge and technology in the country and job creation .

Financial Technology (FinTech) is a cross-disciplinary subject that combines Finance, Technology Management and Innovation Management. FinTech initiatives often lead to new business models or even new business (Leong and Sung, 2018). Fintech is a new financial industry that applies technology to improve financial activities” (Taming the Beast: cien, 2016)

Nowadays, technology is growing so rapidly. Various industries are competing to take the advantage of these technological developments. Through an application, the public as consumers can transact easily. As in the telecommunication industry, there are BlackBerry messenger, WhatsApp, telegram, then the book industry such as amazon. The film industry also took advantage of technology as done by Netflix. Through smartphones, tablets, PCs, or smartTV, people can enjoy movies without ads easily. So does the transportation industry. Through Go-Jek, Grab and Uber application, people can order transportation with easily and cheaper price. Now, technology is also penetrated in the financial industry. Through financial technology people can do all the activities of financial transactions easily.

Financial technology are commonly abbreviated with FinTech, actually not new in the financial industry. the current FinTech through digitalization is done indefinitely. People easy to access to private and alternative investment opportunities and online lending platforms. So, these Fintech services can replacing banking services completely (Desai, 2015).

The evolution of fintechs can be described as follows:

1950s: **Credit cards** To ease the burden of carrying cash

1960s: **ATMs**, To replace, tellers and branches

1970s: **Electronic stock trading**, Exchange, trading floors

1980s: **Bank mainframe computer**, Sophisticated, data and recordkeeping, systems

1990s: **Internet and e-commerce business models**,
Online stock, brokerage, websites
Now: **Digitized retail financing services**, Via mobile,
wallets, payment, apps, roboadvisors, equity,
crowdfunding, platforms...

the services of FinTech are cheap, fast, can be done anywhere, anytime and any device causing this business grow quickly. Fintech is becoming more and more strategic, and it is a great place to focus your career and investments. (Wulan, V.R. 2017).

financial services that usual performed by banks are now easier with technology. Services such as payment, deposits and lending, investment management, are getting easier, cheaper, and faster without need to come to the bank, but it can be done anywhere, anytime and any device through technology. So, it can be said the customer no longer need the bank anymore.

According to IOSCO (2017) "the term of FinTech is used to describe a variety of innovative business models and emerging technologies that have the potential to transform the financial service industry". Still according to them, the FinTech landscape mapped across eight categories, there are payment, insurance, planning, lending and crowdfunding, blockchain, trading and investment, data and analytics, and security.

Paper (Micu & Micu, 2016) approaches a series of fintech innovations proposed by financial service providers on the Bucharest Stock Exchange, under the direct supervision of the regulatory authorities. Thus, fintech innovations on the capital market can be grouped into 2 categories, one concerning the operations of financial service providers, and the second category refers to the interaction of financial service providers with their clients. In the first category we can include the integration of supplier systems with those of institutions such as the Stock Exchange, the Central Depository and through the regulatory framework proposed by the Financial Supervisory Authority, regarding reporting and confidentiality.

Islamic Fintech in the world. According to the Financial Service Authority of the Republic of Indonesia (OJK), among the 64 registered Fintech firms, three of them are the Islamic Fintech peer-to-peer (P2P) lending firms (Aldila 2018).

In this study, we want to examine the extent to which society is aware of new financial technologies (FinTech) and expectations from this area.

2. What is Fintech

The financial technology, or fintech, industry, refers to the group of companies that are introducing innovation into financial services through the use of modern technologies. What is clear is that fintech companies are improving the financial services world through introducing innovative ideas, allowing for speedy delivery and increasing competition. (Rubini, A. 2018)

Rebecca Menat defines FinTech as a new wave of companies which change the way people pay, send money, borrow, lend and invest. Currently, London is the leading FinTech hub, followed by New York, Paris, Hong Kong and Singapore. The financial crisis, which decreased people's trust in banks, has prompted financial innovations. FinTech emerged to provide new financial services at lower costs through mobile platforms and apps. Specifically, FinTech companies offer trust, transparency and technology.

Through innovations such as peer-to-peer lending and crowdfunding, FinTech provides people with easier access to loans and widens the opportunities for investment. For example, peer-to-peer lending such as the Lending Club has created disintermediation to credit, connected buyers and sellers through marketplaces.

Equity investments were once limited to wealthy individuals, but now FinTech has made them more accessible to all. Through crowdfunding startups such as Kickstarter, Indiegogo and Crowdfunder, people can invest in many projects.

FinTech solutions can help SMEs. SMEs can face many problems, such as with their cash flow, and also opportunities such as expansion. FinTech provide solutions for both problems. tools for budgeting and

cash flow management, which is integrated with banks, credit cards and loan accounts, and sorts spending and cash flow based on categories, helps with budgeting and bill payment reminders.

Fintech Activity Classes

Fintech landscape mapped across eight categories: payments, insurance, planning, lending and crowdfunding, blockchain, trading and investments, data and analytics, and security. Of these, certain aspects of planning, lending and crowdfunding, blockchain, trading and investments, data analytics, and security can intersect with securities regulation.

Financial payments

Payment section is a key term in FinTech that is used in applications and services related to the financial transactions of national and international transactions. Subgroups of this section as follows :

Blockchain and Virtual Currencies: These are networks that offer virtual currencies and unsupported currencies as a substitute for regular currency. According to legal payment methods, this type of money can be saved, exchanged or used in the stock market. Like many other digital payment systems, blockchain is used to protect bitcoin transactions. With this technology, all transactions are recorded and stored on various servers. Forgery of information is very difficult.

Alternative payment methods: such as payment methods using smartphones. (Rouhani Rad, S. 2020)

PayTech refers to the combination of payments and technology. Innovative payment services now form part of the PayTech ecosystem and have dominated the early days of the FinTech revolution through mobile, cross-border, peer-to-peer, and cryptocurrency payments. Financial institutions have had to digitize their current offerings to create new channels linked to a digital platform.

There are two main directions to which the Payments industry is being changed by Fintechs. The first is about how we, as consumers, will interact when it is time to pay for our goods – a cashless world. The second major shift is on new payment rails.

The world without money is like you request to get in a car, the driver picks you up and when you arrive, you just leave the vehicle. This process is done without paying cash, which is called a unified bill, and is one of the four main processes that disrupt the world without cash. Most innovations in this process are adjacent to current payment processes. They basically modify the front-end and improve overall customer experience. There are four main fields of innovation: mobile payments, integrated billing, streamlined payments and next-gen security. Mobile payments will be available through mobile wallets and mobile based merchant solutions. Wallets can be server-side (cloud based and managed by organizations – ApplePay, GooglePay) or client-side (managed by the customer on his own device). Some of the common service providers use Near-field communication systems, so you can swipe your phone at the cashier and move on. In other scenarios, mobile payments might work on top of regular mobile connections and it is used to spread access. It works with your phone and you can transfer money, pay bills and buy on stores. Mobile based merchant solutions leverage the store owner side, amplifying their available payment options. Another trend about the cashless world is security. Biometrics, location based and tokenization/encryption will make the previous trends feasible and less susceptible to fraud. Biometrics and location based are straight forward, meaning that the technology will use your location and unique bio-characteristics to allow payments. Tokenization, on the other hand is the process of protecting your data by replacing it with an algorithmically generated number called a token. This allows for consumer data to travel through the web without any bank or credit card details to be exposed.

The second major shift is about payment rails. There are three main trends of disruption: Blockchain, P2P transfers and Mobile Money. Cryptographic protocols' (blockchain) biggest chance of impact is on the streamlining of value transfer, rather than on the storing of value (as a currency). P2P transfers usually refer to cross-border money transfers and mobile money refers to the transfer of value through the phone network.

Blockchain is basically a list of records, linked together using cryptography. Each block has some information about the previous one and is validated by the network behind it. The overall record, all the blocks, can be kept by multiple nodes (machines), creating a decentralized environment, which means no need for one unique source of truth. Therefore, it creates a chain of unique blocks of information, that are encrypted and spread in multiple locations. This makes the system extremely secure and very difficult to change (or fraud) because, in order to change a block, you need to change all blocks that come after it and to change it in multiple places. For Banks, that keep books of transactions together, this is a huge tool. Blockchain is a low cost, real-time, secure, transparent and traceable record keeper. Bitcoin and all other cryptocurrencies are one of the possible ways to use blockchain. Financial institutions can either adopt some of the available protocols or build something new. Blockchain is also a P2P distributed ledger. It has no central location and therefore carries no transaction cost. Each transaction is safe and automated. The initiation of a transaction creates a block. A network of servers verifies the integrity of the block. Because each server is part of the transaction, it's impossible to alter the record once it's created.

The term (P2P) peer-to-peer means that there is no central store of data; each computer can act as a server for the others in use, and all have shared access.

Regarding mobile money basically, a company creates a system that supports payments through mobile networks. Transactions might be in the form of any value issued by the central intermediary of the operation. This solution is very interesting, specially to foster the deployment of financial services to the "unbanked" population. The usefulness of these networks, as we've seen before, depends considerably on the scale of adoption though. If few people and companies adopt it, it doesn't work.

Insurance

InsurTech firms initially started to explore offerings that large insurance firms had little incentive to pursue. For example, they offered customers the

ability to customize their policies, and they used Internet-enabled devices to collect information about behavior (such as driving habits) that could be used to dynamically price insurance premiums. Traditionally, the insurance market has worked with relatively basic levels of data to group respective policyholders together to generate a diversified portfolio of people.

Over the past decade or so, many incumbents in the insurance industry have adopted digital channels as well as process automation. As the industry becomes more consumer focused, many emerging technologies will pressure the insurance value chain, pushing towards disaggregation.

But how exactly will this disaggregation of the value chain occur? The usual Insurance value chain can be divided in (i) R&D and Product Development, (ii) Distribution, (iii) Underwriting, (iv) Claims and (v) Risk Capital and Investment Management. The areas in which disaggregation might hit the hardest are Distribution and Underwriting.

In distribution we have the online aggregators (that allow you to compare insurance prices) and the entry of huge tech players in the market such as Google and Amazon. traditional brokerage firms and distribution channels are being replaced by these new online tools that are easy to access. In this sense, the direct dealing with the customer could move hands. With price comparison and moving around from one insurance company to the other getting easier, customer retention and engagement become increasingly important.

The second trend in terms of disaggregation of the value chain comes from the fact that many of the assets that are currently insured will evolve in their ownership model and usage. Therefore, underwriting (the evaluation of risk and exposure) will need to evolve. Sharing economy is changing our relationship with our home and our cars, two of the major insurance products nowadays. In that sense, the risk assessment and pricing of insurances will need to evolve from the single-ownership model to something different. Also, the advent of self-driving vehicles will likely reduce the risks of being on a car. Added to ridesharing, the insurance model for vehicles might move from the driver/owner to the manufacturer, who

builds the self-driving vehicle, or even to the operator that gets the asset into usage in a ridesharing platform.

Blockchain is now bringing scale to a different type of insurance: Peer-to-peer. How does it work? A group of people with common interest and risk profiles get together to cover their potential losses. In the advent of a claim, the group or the entity behind the group analyses the claim and decides how to proceed. Blockchain is empowering this way of getting insured because it reduces significantly the costs related to the process and therefore reduces premiums. If there are any leftovers, the money is returned to the group or even passed to charity.

Connectivity will change the insurance industry in a different way. Data will allow higher personalization, price accuracy, transparency and, consequently, engagement. As an example, your health and behavioral data will be accessible to your insurance company through the many apps and wearables available. Your medical profile will be accessed in order to facilitate personalization and forecast. Through AI and machine learning an insurer will be able to crunch all this data to get you a personalized insurance plan, with the right price and even tell you how many exercising hours per week are necessary to reduce your yearly premium (engagement). It will be easier for insurers to spot fraud and, consequently, overall price tends to reduce.

The same (adding sensors and measuring) can be done to your home, vehicle (if you decide to own one), and other assets to understand more profoundly how you live. This data aggregation will bring the industry to a telematic insurance model but will require insurance companies to work together with device manufacturers and other ecosystems players to build the kind of network required to fully connect insurance.

the insurance industry has found that companies using predictive analytics, based on big data access, are better able to price and manage risks than they have.

In non traditional schemes, the process use telematics. Telematics insurance product leverage the GPS technology and wireless communication to enable

auto insurers to collect usage and behaviour data of their customers in real time or near real time (World Economic Forum, 2015).

Deposits & Lending

This may be one of the most interesting topics when it comes to discuss the role of financial institutions in our lives in the future. Deposits and Lending incumbents (including retail banks) are some of the oldest institutions we have nowadays . Besides that, this is one of the most regulated sectors in worldwide, and each country has its own standards.

The World Economic Forum outlines two key trends that could change the future of the retail banking industry - WEF: (i) money lending will change, and (ii) customer preferences will tend to be much higher than they are today. Is, be related.

Money lending is the main reason for shift to access to loans. Lending platforms are already transforming the way credit is evaluated and new sources of capital are available to the people in need of loans. Peer-to-peer (P2P), lean and automated process and different ways of adjudicating are the main drivers of change for now. For the following reasons, traditional banks will be justified by the changes: Access to credit is generally limited to people with good credit profile, a lot of time is spent processing credit files, customers usually do not have good experience, and the rate of return depends on It is not attractive to costs.

The P2P model works as follows, first it provides different sources of lending that are usually more attractive than the regular loan you can get from your bank. It works as a marketplace for investors (looking for better returns) and Loan applicant (looking for lower interest rates). It is easy to access, register and it works in an auction format (investors bid to finance Loan applicant).

In terms of adjudication and lean processes, technology enables companies to do more than check the credit score of a person. Machine learning and data science allow for a better verification of a borrower profile and faster decision processes. Some companies have been “using non-traditional data to compute people’s credit scores” for a few years and has now

licensed its systems to other institutions. The same is happening to business and There are companies as examples that leveraging data in order to provide better, faster, and cheaper loans to small business, usually considered high risk by traditional institutions.

Virtual banks are those that give you access exclusively though virtual (phone, back in the days) or mobile systems. They can only be accessed virtually. If you have a compelling customer support system and everyone owns a smartphone, why do you need the branch? Or at least, why would you need many branches in one single city or region? Added to the trend of having several services at reach with your phone (mobile banking) this shift makes sense. What bank today has no app that you can use and make small transfers or pay bills? What about banking as platform? Imagine that you have an app in your phone. It holds your personal account, it connects to your selected digital wallets, it allows you to transfer money through many different channels, as well as pay for goods. Lastly, the app allows for other service providers, to be accessed and compare its prices with other money transfer companies. You select the service provider you want and move with your transaction. All in a single place, integrated, secure and transparent. This structure does not only create and push products to customers as current banks do. It allows for others to contribute and create services that build into the experience through an open Application Programming Interface (API). This would allow for the creation of network effects like the ones seen in companies such as Facebook and Amazon. Many of today's neo banks are trying to move in that direction, and one of the largest technology corporations in the world are also moving towards banking. If they will be able to succeed in this heavily regulated industry is yet to be known. Incumbent banks are not just watching. They are moving towards technology as well to catch up with consumers and improve their services.

Capital Raising

The concept of capital raising is straight forward. Companies in need of capital seek for investors in the market. Historically, all services related to gathering

and investing funds were left to very specialized financial institutions, leveraging their network and experience to select firms and invest on them. Those companies serve as the experienced middleman, linking those who need to those who can provide. The problem of the model is that almost, if not all, investment decisions are left with the institution and very little to the individual investor. Also, values were usually high, meaning that only high net worth individuals usually had access to this kind of investment.

Fintechs that operate on this field act as facilitators. They also connect companies to investors, but they just present the opportunities, giving back the investment decision (partially or fully) to the investor. This new approach usually reduces the cost of operation and, consequently, lowers the necessary returns. This allows more people to invest (lower values) and new possibilities to companies that previously were not target by financial institutions. It doesn't mean though that current incumbents in this market will necessarily suffer (expert knowledge is of high value), it means that the relationship with smaller investors might change as well as the access to companies to invest on. It also helps those individuals who are not seeking high returns to make investments in institutions and causes they believe and support. Finally, it can even help companies to look for customers to support their expansion.

Crowd based funding or crowdfunding Fintechs provide a marketplace for investments. It uses the powers of masses (network) to fund companies. The company sets how much it needs and, usually, the minimum amount of money to be invested, and gives companies shares back to the individual investors. The investment only takes place when the amount required is reached. The public acceptance is the "proof" of concept investors might need and might increase accuracy, considering that a higher range of individuals evaluate the opportunity. Crowdfunding was mostly used for early investment stages (seed) but now it also helps people to invest in social causes they believe.

A different version of crowdfunding allows for experienced individuals (angels) in specific fields to lead investments. They have the same concepts as the crowdfunding Fintechs, but now with the additional component that there is an actual expert leading the round, evaluating the company and helping all others come to a decision. This sort of syndication helps investors make more asserted decisions. Many different initiatives in this front have been appearing around as a secondary way for angel investors to find and be able to invest in more companies.

A new way of companies raising capital by appealing to its customers was created with Blockchain. Companies that use the technology can issue a cryptocurrency, also known as coins or tokens, to investors. Those coins are a kind of digital ownership of the company, and eventually can be exchanged by services at the platform. In this case, customers literally finance the company, buying upfront and eventually converting the coins into services. The whole process is called ICO (Initial Coin Offer) and they are interesting for companies because they allow money raising without the compliance and intermediaries traditional IPOs have. The process is still very controversial, given the opportunity it creates for scams and securities violations.

Investment Management

The Investment Management industry deals with everything related to how you apply your capital to get returns on the capital markets (bonds, shares and other securities), as well as other assets. But the industry has been going through some shifts since the last global financial crisis. Changes in regulations, diminishing returns to smaller investors and fees have been pressuring this market.

At first, technology might drastically reduce the costs of trading through automation. Second, it also it provides customers with other ways of trading rather than your trusted broker. Finally, it might facilitate the creation of trading algorithms to more specialized traders. these new ways of trading empower the customer and make investment management more accessible to the crowd.

In terms of automation, the main idea is to use artificial intelligence and machine learning to provide information and investment advisory instead of, or in addition to, the traditional ones. Companies like Personal Capital merged a wealth management information system with the robo-advisory in order to help customers increase their earnings. This means less cost, more options and more access for investors. Some other companies have taken it a step further and allow customers to implement their own trading algorithms. So instead of you trusting someone else's algorithm, you can build your own and use it to trade securities.

Besides what we could call the regular investment companies, social trading became another investment channel. It allows for regular people to mirror the trade of others, leveraging experts' knowledge and adding a layer of the "wisdom of the crowd". You log into the platform, compare your returns with other people and eventually mirror those investments in order to achieve similar results. For the ones being mirrored it might even become a source of income. The platform literally pays you to stay trading through their systems and attract more people. The tool is transparent and it gives newcomers the opportunity to learn some of the techniques only more seasoned investors know how to execute.

On another take, technology might also enable financial service firms to fully externalize part of or the whole of its processes. What once was a huge differentiation between investment management firms, process quality and cost, might become an equal playground for any firm that leverages service providers. Automation (machine learning and AI), cloud services and natural language processing. The key question left to answer is which part of the investment management job remains "core". The industry's capabilities can usually be segmented in data collection, analysis, investment strategy definition, monitoring, risk assessment and compliance. All these processes can be influenced and changed using the technologies listed above and others. As companies move towards this externalization of resources, costs reduce (shared infrastructure), sophistication might

increase (technical, specialized firms), and lower costs of changes (because it will need to be done by a supplier).

Market Provisioning

Market Provisioning is moving by some of technologies and integrations of them, The two main drivers of change are smarter machines and platforms, which will better connect assets' buyers and sellers. the technologies that make faster and smarter machines are big data, machine learning and artificial intelligence. The difference is in how to apply those tools to facilitate the trade of stocks.

The new algorithms first read what is happening in the real world (literally, machine-readable news) through business news platforms. This makes the algorithms event driven and allow them to react almost instantaneously to what is going on in the world. Added to that, those machines analyse and discover patterns within big sets of data, now fully available through cloud platforms and specialized databases. Finally, the entire process is automated through machine learning systems and artificial intelligence. The trading will get better over time, learning how to react to external information.

Considering all the infrastructure required to build such trading systems, this usage of technology might help divide individual traders from institutional ones. about the connectivity between buyers and sellers, the change is about how the process is intermediated. For some assets, such as bonds and stocks, formal markets exist (Nasdaq, Dow Jones, etc.). But for less standardized assets, buyers and sellers rely on how well related their intermediary institutions are. This dependency on relations might cause some limitations to the model. It is not the most efficient way to trade assets, and it might cause sub-optimal pricing given that no single company knows everyone else on the market.

It is in this scenario that platforms are being created. They connect the intermediary companies (buyers and sellers), facilitating the process. Those platforms have standard ways of collecting and exposing data that facilitates the decision making to

both sides. This improves efficiency and give intermediaries a bigger range of opportunities. The risk for the intermediary is the possibility of those platforms moving to the actual buyers and sellers and connecting them directly, acting as brokerages. Even if that's not the case, the spread of quality information improves the market efficiency, price accuracy, transparency in transactions, and reduces costs.

it is easy to spot some commonalities between all services:

- 1) The infrastructure is being streamlined (platforms, cloud and shared infra)
- 2) Automation of previously highly manual activities (AI and machine learning)
- 3) Intermediates are being removed from the chains, lowering the costs
- 4) Data has never been more strategic (access to new data sets and incorporation to services)
- 5) Rise of niche sectors, deep specialized, increasing competition (unbundling of services)
- 6) The customer is at the center of everything (focus on customer experience)

There are a couple of reasons why FinTech has grown tremendously in the last couple of years. First, the millennials are very familiar with the Internet and they are used to finding simple and fast solutions to their problems through the use of technology. FinTech fulfills their needs in the context of financial services. Second, the widespread use of the Internet, social media and smartphones has driven the idea to conduct transactions online. Third, Big Data has enabled the usage and utilization of data in large volumes, with the variety and velocity that supports the implementation of FinTech (Modalku, 2016).

3. Method

This research is applied and survey and has been done in order to examine the extent of society's knowledge of new financial technologies (fintech) and expectations from this field. First, scientific materials have been published and researches have been made available in connection with new technologies. Finance was studied to explain the dimensions and

issues related to this issue. The information and concepts obtained using the opinions of financial experts and interviews were used to conduct this research and questions were extracted and designed in the form of a questionnaire.

The questionnaire was uploaded on the website and its link was sent through various methods, including social networks for different groups, including experts and activists in the fields of economics and finance, students of different educational levels and other social groups. They have been exposed to more than 1,000 people.

6. Conclusion

Some of the preliminary results of this study are as follows:

- The amount of knowledge about fintechs is an important factor in the level of participation in the survey and answering its questions.
- Due to the number of people who were exposed to the questionnaire and considering the rate of participation in the survey and the rate of answering its questions, a number of people participating in the survey were interviewed.
- Due to the participation rate in the survey and interviews and the results of the survey, people know little about fintechs.

It should be noted that although more than 66% of the participants in the survey had a higher degree than a bachelor's degree (PhD, professional DBA and master's degree) and about 30% had a bachelor's degree, but 48% of participants In the survey, they announced their level of awareness and knowledge about new financial technologies at a low and very low level, and about 33% stated at a medium level, and only about 19% stated that their level of awareness and knowledge at a high level, and It is very much in line with the findings and analysis mentioned in the above paragraph.

According to the participants in this survey, the priority is to develop fintechs and provide new financial services in the following areas, respectively.

- 1) Development (promotion) of financial markets
- 2) Investment management
- 3) Financial payments
- 4) Financing
- 5) Insurance, deposit and lending

And the priority in the development and application of the following technologies can help create a suitable platform for FinTech activities.

- 1) Geographical development, improving bandwidth and increasing internet speed
- 2) Artificial intelligence and machine learning
- 3) Blockchain technology
- 4) Cloud, cognitive and quantum computing

Also, the most important factor in the creation, growth and development of fintechs are the following factors, respectively

- 1) Existence of transparent laws and reduction of bureaucracies
- 2) Reduction of monopoly and existence of competitive market
- 3) Existence of appropriate infrastructures
- 4) Government support for fintechs and start-ups in this field
- 5) Financing by banks

In this study, 69% said that fintechs can change or improve the future of financial services to a great or great extent.

In the field of payment services and financial exchanges, innovations in the fields of payment methods using cryptocurrencies, payment methods using mobile money such as QR-Cod and NFC, mobile payments (with banks) and payment systems with more security are almost The priorities are the same, and the greatest expectation from these technologies is to reduce intermediaries and reduce costs.

In the field of insurance services, the highest priority of innovation is in the fields of participatory economy (payment for consumption), cheap and smart sensors, and the Internet of Things and Wearables, respectively. The most expected of these technologies

are to reduce intermediaries, access to new data and deeper understanding of customers and markets, provide customer-oriented insurance products, automation, and reduce costs, respectively.

In the field of deposit and lending services, the highest innovation priorities are in the fields of mobile banking transformation, P2P lending (elimination of bank intermediaries and person-to-person lending), and dynamic (dynamic and online) credit measurement, respectively. The most expected of these technologies to increase access and eliminate intermediaries, faster and more user-friendly processes and more informed decisions, respectively.

In the field of financing / capital services, the highest priority is innovation in the fields of markets and institutions of financing and crowdfunding (Crowdfunding). The most expected of these technologies are to be able to search for investment areas and diversify the selection, increase control over investment decisions, reduce financing time, reduce costs, respectively.

In the field of investment management services, the highest priority of innovation in the fields of advanced analysis is the automated wealth management of trading algorithms, respectively. The most expected of these technologies for higher efficiency, personalization, reduction of intermediaries, and greater transparency and control, respectively.

In the field of financial services development (upgrade), the highest innovation priorities are in the fields of infrastructure and Internet development, artificial intelligence-machine learning, big data and algorithmic transactions, respectively.

The most expected of these technologies are to improve access to financial markets, reduce costs, increase the efficiency of financial markets, access new data and deeper understanding of customers and markets and increase liquidity in markets, respectively.

In order to achieve proper growth and survival for companies that are active in the field of financial services, the necessary platform should be constructed and the society's expectation of new financial services must be accounted too.

References

- 1) rouhani rad, s. (2020). fintech; essay in worldwide and iran. journal of science and technology policy lettersis, 10(1 (30)), 75-94. <https://www.sid.ir/en/journal/viewpaper.aspx?id=769974>
- 2) o'hanlon, s. chishti, s (2020). fintech for dummies , published by: john wiley & sons, inc
- 3) mashhadi abdol, m., & samari, d., & abbasi, e., & ashrafi, m. (2020). entrepreneurship strategic analysis of fintech in banking scope. financial engineering and securities management (portfolio management), 10(41), 393-412. <https://www.sid.ir/en/journal/viewpaper.aspx?id=787032>
- 4) ion-costel-marius, b. (2020). the fintech ecosystem in romania. in proceedings of the international conference on business excellence (vol. 14, no. 1, pp. 273-281). sciendo.
- 5) nikkel, b. j. (2020). fintech forensics: criminal investigation and digital evidence in financial technologies. forensic science international: digital investigation, 33, 200908.
- 6) arvian firmansyah, egi & anwar, mokhammad. (2019). islamic financial technology (fintech): its challenges and prospect. 10.2991/assdg-18.2019.5.
- 7) najafi, f., & irandoost, m., & soltanpanah, h., & sheikhahmadi, a. (2019). a model for relationship management with fintech and financial startups in banking industry. journal of business strategies, 26(13) , 1-18. <https://www.sid.ir/en/journal/viewpaper.aspx?id=691451>
- 8) khodakarami, a. mirkhandouzi, s a(2018), fin-tech and the future of financial services, published by: farhang shenasi
- 9) rubini, a. (2018). fintech in a flash. berlin, boston: de gruyter. <https://doi.org/10.1515/9781547401055>
- 10) wulan, v.r. (2017). financial technology (fintech) a new transaction in future.
- 11) international organization of securities commissions-iosco (2017): <https://www.iosco.org/library/pubdocs/pdf/ioscospd554.pdf>

- 12) amalia, f. (2016). the fintech book: the financial technology handbook for investors, entrepreneurs and visionaries. *journal of indonesian economy and business*, 31, 345-348.
- 13) dutta, s., geiger, t., & lanvin, b. (2015). the global information technology report 2015. in world economic forum (vol. 1, no. 1, pp. p80-85).
- 14) <https://www.linkedin.com/pulse/fintech-market-provisioning-industry-tulio-barcelos>
- 15) http://www3.weforum.org/docs/wef_the_future_of_financial_services.pdf
- 16) <https://www.linkedin.com/pulse/fintechs-payments-industry-tulio-barcelos>
- 17) <https://www.theguardian.com/business/2013/apr/23/ap-tweet-hack-wall-street-freefall>