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Financial Technology: A double edged sword

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Financial Technology, or FinTech, is the application of new technological developments to products and services in various financial sectors.

FinTech services may benefit the banking and financial services industry by providing more effectiveness, lower costs, better accessibility to financial activities, and less reliance on a central authority.

Among many things, for example, financial technology has improved the operational efficiency of financial institutions in many countries of the Arab world. It has increased customer satisfaction in the financial services sector.

Also, it is worth mentioning that digital financial services facilitate financial inclusion and contribute significantly to the re-development of the economy and the promotion of economic growth GDP.

I- Advantages and opportunities offered by financial technology

FinTech will guarantee that customers around the world will have access to financial services and products. It will provide financial inclusion, which means that individuals and companies will have access to effective and low-cost financial products and services that meet their different needs, such as financial transactions, payments, savings, credit, and insurance, delivered responsibly and in a sustainable way.

Financial products are not yet accessible to the general public. In certain cases, it is due to the fact that banks are underdeveloped, and therefore their operation is minimal.

Also, certain people are unable to open a bank account because they do not meet the bank's minimum standards and also must contend with exorbitant transaction fees. According to statistics, 38% of individuals worldwide are unbanked, whereas around 40% have access to financial services. FinTech will allow the unbanked to be served by P2P lending platforms, which will collect various but essential information through their systems.

1. FinTech will improve accessibility in many ways:

To begin with, funding for new projects may be raised from a range of investors by utilizing Crowdfunding networks. Second, because these platforms serve a large number of users, the risk will be dispersed among them. Usually, the risk is generally taken by a single company or person, and the investment can be split among multiple projects or can cover only one project.

Traditional banking will be improved thanks to financial inclusion offered by FinTech. Long ago, individuals and businesses used to have fewer options when it came to financial services, which led to unnecessary authoritarianism in the banking sector, resulting in poor service quality and high transaction fees. New entrants to the system, on the other hand, would put pressure on banks to provide better service or risk losing customers.

a. CrowdFunding platforms:

Crowdfunding is described as a technique for collecting funds by soliciting contributions from numerous individuals online. Previously, the only sources for borrowing money were banks or people, and both creditors required collateral and used risk-reducing methods. Despite these market barriers, internet fundraising and lending businesses are growing.

Furthermore, crowdfunding has become a winning strategy for entrepreneurs and investors. This enables entrepreneurs to reach a large audience via special platforms and allows investors to make profits.

It can be said that the internet's power is important because big data will assist in attracting the interest of vast groups of people. And though the word "crowdfunding" is relatively recent, large-scale fundraising is not.

Donations, grants, equity, and debt crowdfunding are all options for raising funds. For instance, crowdfunding which is based on donations gives participants no direct benefit, so the main amount of money raised is not returned. A successful crowdfunding campaign is evaluated by the amount of money collected and the number of

contributors. Moreover, in reward-based crowdfunding, payments are made by offering future products or services.

Peer-to-peer lending (P2P lending) refers to loan-based crowdfunding. In essence, the debt/investment will be fully repaid to the lender, and it may be subject to a certain interest rate.

Additionally, investing in equity-based crowdfunding means receiving stock in return for money, that bears similar liabilities to stock investing; investors will lose money if the company in which they have invested does not make a profit.

On the loan-based and investment-based crowdfunding platforms, there are three primary business models:

The conduit model: promotes investment opportunities while ignoring investment options and determining loan prices,

Pricing model: Determines loan prices but allows investors to choose investments,

The discretionary platform determines the pricing, and the investor has no say in selecting lenders.

The earliest campaigns used to raise money started in the entertainment sector with music and films before things like text messaging came around. Three or four players are involved in the initial crowdfunding concept: the project initiator, the investor, and the crowdfunding site. Accordingly, most websites function as intermediaries between project initiators and investors.

b. P2P lending platforms (Crowdfunding based on loans)

People can lend money to individuals or companies through P2P lending networks and receive a return on their investment. This kind of lending is like bank loans. Hence, a borrower that cannot get credit via conventional channels will resort to this alternate method of funding. Also, by storing and analyzing consumer data, that platform will handle the credit scoring procedure.

Lending platforms would provide an efficient, transparent, and lower-cost alternative to traditional lending because of the new dangers arising from fraud risk.

Accordingly, there are many kinds of lending platforms with varying risk profiles. Thus, the first type is similar to conventional banking operations and the second type of platform will not bear any credit risk or even maintain any loan on record.

Although FinTech will increase financial inclusion and contribute to developing new businesses, funding capital for ventures or start-ups is a concern when it comes to lending. Traditionally, fund-raising is conducted by banking institutions or angel investors, but there are some risks as well as some regulatory hurdles to face

2. Increased efficiency and cost-effective solutions.

In the past, many companies have wasted significant time and resources on customer service. This practice is now being challenged by the low-cost services offered by new fintech companies, based on the use of artificial intelligence and data analysis provided by various platforms.

The competition between traditional banks and financial technology companies is increasing with the growth of innovation, which directly affects traditional banking systems and pushes them to invest more in financial technology. For example, the processing time for a conventional loan can take weeks or even months. It means that getting a loan from a bank on the same day is difficult. As a result, they turn to FinTechs to promote advanced technology-based services and reduce the cost of transaction fees that may sometimes be unnecessary.

3. Enhanced risk management and operational performance.

The use of financial technology, including big data, has enabled financial firms to predict user behavior and develop security measures. This adds to the improvement of risk management and operational effectiveness in particular. Consequently, with the use of big data, it is now able to monitor consumer behavior, resulting in an improvement in service quality. Thus, the services brought to market will be more tailored to customer requirements.

a. Open Banking

Open banking is the process of granting third-party payment services and financial service providers access to banking information, such as a consumer's transactions and payment history. This is enabled through the utilization of application programming interfaces (APIs).

Open banking will enable AI-powered chatbots to assist users in monitoring their spending, saving money, and achieving their financial objectives. Additionally, users will be able to consolidate all bank accounts and transactions into a single app.

4. Implementing Transparency

Typically, financial organizations disclose only limited information about their consumers. In contrast, FinTech solutions enhance openness, enabling regulators to perform their duties more effectively because they have a clearer picture of the financial situation. In addition, an open and transparent environment allows authorities to analyze whether a fintech company's operations pose a threat to the financial sector.

One of the most prominent sectors in financial technology is blockchain distributed ledger technology, which is a method of storing information, based on a distributed digital record of transactions that is copied and distributed across the entire network of computer systems. on the blockchain so that it cannot be altered or hacked.

Each block in the chain contains many transactions, and each time a new transaction occurs on the blockchain, a record of that transaction is added to each participant's digital record. Thus, every completed transaction can be tracked thanks to the block chain feature that ensure transparency.

5. Smart Contracts:

Ethereum is an open-source, public blockchain that effectively implements smart contracts. This innovation would modernize contract laws around the world and give individuals access to new contractual solutions that are more efficient.

In a nutshell, a contract is drafted based on the parties' agreement, signed "cryptographically," and uploaded to the blockchain. Then, the computer will automatically execute the contract when the contract's coding requirements are met.

An example of how smart contracts and cryptocurrencies may be used in practice is when two parties have decided to rent an apartment and the contract details are digitally implemented. The payment will be made in

cryptocurrency via the blockchain, and after receiving payment, the tenant will provide a "digital key" within a limited time to the renter in order to access the apartment.

Using smart contracts would increase the efficiency of banks and financial organizations while lowering their expenses. For instance, banks operate as mediators in the execution of letters of credit, which involves a process of customer-motivated verification that wastes time and incurs unneeded costs. Consequently, the solution is to utilize smart contracts that are automatically formed based on predefined conditions, resulting in faster operation execution and lower expenses.

Fintech services have a huge advantage over traditional banking services due to the fact that they eliminate geographical constraints and narrow the gap between consumers and companies.

This technology permitted the development of payment facility solutions and the establishment of electronic wallets that eliminated the need for cross-border transactions and even reliance on banks.

a. Cryptocurrency as a model of payment :

Cryptocurrencies operate through an automated peer-to-peer computer network in which all transactions are openly recorded. The transaction's timing, account number, and amount are all secured in a distributed process.

A centralized authority is accountable for guaranteeing that no duplicate spending happens, which means that they are responsible for maintaining the safety and protection of transactions. Moreover, anyone who wishes to participate in validating cryptocurrency is referred to as a "miner". Accordingly, users have two keys: a public key that everyone may access and a private key that only the holder knows.

Every consumer, in general, "has a public key and a private key: the public key can be accessed by anyone, ensuring transparency; the private key, on the other hand, is a private code that the holder can only know."

The payor and the payee, both have the two mentioned keys. First of all, the payee secures all transaction details in the payer's public key and then transmits the information to the payer, which views it using his private key. Once the parties agree on a transaction, it is forwarded to the minors for confirmation.

There is a lot of value in talking about the legal status of crypto currencies, which has become a contentious topic among academics. Accordingly, they can be classified as currency, commodity, commodity money, or security, among other things.

Each country has a different approach regarding crypto currencies, but they are mostly classified as "private currency."

6. DeFi

Decentralized Finance, abbreviated as 'DeFi' is an attempt to duplicate certain aspects of the existing financial system in an open, decentralized, permissionless, and autonomous way using blockchains. As with any application based on distributed ledger technology (DLT), DeFi may possibly deliver efficiencies through automation and decentralization enabled by Blockchains and smart contracts.

7. Robo advisors:

Investment products and services have also changed as a result of new technologies.

Robo-advisors are digital systems that use information technology to help serve clients by providing advice based on artificial intelligence, which incorporates dynamic and smart customer support features. Moreover, human financial advisors are on the verge of being obsolete.

Finally, investor profiling has traditionally required in-person interviews and bilateral relationships to determine customers. However, these have been replaced by online questionnaires, and customer investment schemes where algorithms have established risk limits.

II. Disadvantages of FinTech:

1. Downsides of financial technology

FinTech contributes to the industry by decreasing costs, increasing transparency, and minimizing inefficiency. However, these benefits are compensated by new threats and problems that must be resolved first.

Fintech-based services constitute a modest portion of the public finance industry; however, this is a misconception, particularly in light of the period since the 2008 financial crisis. Therefore, we should carefully evaluate the risks and disadvantages of financial technology. The problems include the absence of legislation relevant to regulations, data privacy, consumer protection against fraud and malware, dependency on third parties, money laundering, and the financing of terrorist organizations.

Due to the lack of necessary infrastructure in numerous nations, its impact on the financial sector must be taken into account.

2. Regulatory hazards

As more individuals and organizations utilize digital financial technology services, the lack of a framework for new services and products has become a major concern for the financial sector.

Consumer protection, financial stability, and financial integrity can be affected by regulatory ambiguity in the domains of crowdfunding, peer-to-peer lending, mobile payment systems, and blockchain DLT. Therefore, the instability of the fintech regulatory environment may be perceived as an opportunity by people or businesses seeking enormous short-term gains, posing a threat to the stability of the financial sector. In addition, the lack of global regulatory standards for a significant number of financial technology services exposes users and customers to the risks we have already outlined. To take advantage of these loopholes, the vast majority of investors establish FinTech companies in regions and countries that are less legally regulated.

a. An example of a smart contract:

As a result of the blockchain's decentralization, it is now possible to execute a smart contract in any jurisdiction worldwide. The challenge with smart contracts is their application; here, the jurisdiction of the countries where the contract is being executed must be considered; how could the existing laws be applied to these contracts?

A contract is a verbal or written agreement between two or more parties that is legally enforceable. It is a set of promises, with each side often promising to do something in exchange for the other party receiving some benefit.

If one party fails to fulfill his obligations under the contract, that person has violated the agreement and must pay the agreed-upon compensation.

In order for a contract to be valid, enforceable, and legally binding, it must contain several essential elements. Initially, it must contain and precisely specify the terms of the agreement and must be in writing and signed by both parties for it to be valid.

Also, the contract is based on the value of the money, compensation, and shares traded between the parties, as well as on their relative positions. Moreover, the parties must be mature, sane individuals whose purpose is to keep their pledges.

The United Kingdom Jurisdiction Taskforce (UKJT) reached the conclusion in 2019 that smart contracts might (in principle) fulfill the conditions for the valid formation of a binding and enforceable contract.

However, given the specificity of the smart contract, can it be regarded as a standard legal contract subject to the law of obligations and contracts under civil law?

We can see that most of the standard contract terms do not apply to smart contracts, thus if a dispute arises over their interpretation, we must look into the relevant legislation to determine whether the contract is valid or not. There are also concerns over the parties' independence. Hence, in the absence of a clear governing law, the rights of the weaker party in the contract must prevail.

In addition, smart contracts are created by programmers in the form of computer codes, which is problematic because the majority of financial and legal professionals lack programming expertise. A difficulty arises if the contract's parties go to the courts to resolve a dispute relating to the contract's provisions or even if the contract is implemented on the blockchain and a conflict arises as a result. Furthermore, it is important to evaluate whether programmers will accept responsibility for their actions, in those issues involving programmed codes.

Lastly, smart contracts are marketed as a means to save money on expenses such as legal fees, but users must pay for contract drafting because each contract is unique.

3. Data security

The advancement of technology has enabled financial technology firms and banks to monitor and gather all types of client data and use it to forecast their behavior and determine the direction of the markets. Consumer information has been increasingly valuable in recent years. This is crucial in the financial industry since it directly affects the profitability of lending, insurance, and other financial operations. Complex algorithms are employed to process or evaluate consumer data in order to produce personalized products.

For example, examine the collecting of data on the social networking platform Facebook. Users should permit limitless data processing by third parties or private companies when their information is used for marketing purposes. Subsequently, the Cambridge Analytica scandal prompted numerous allegations related to alleged user data manipulation. About 50 million Facebook users were unlawfully targeted with political advertisements intended to confuse or alter their personal beliefs. Administrators are consequently becoming more aware of the hazards associated with data security. The European Union and the United Kingdom have enacted the General Data Protection Regulations, which safeguards the privacy of personal data. According to the law, any data pertaining to a natural person are identifiable and are deemed personal data. A person's consent is also required under this law, which states that they must be fully informed as to why their information is being collected before it is used.

FinTech companies and BigTech will be penalized if they do not adhere to the required standards and regulatory rules. However, it must be determined whether these financial penalties are sufficient to prevent these businesses from illegally acquiring data.

4. Fraudulent activities

Financial technology is a common target of fraudulent actions due to its widespread use. Ponzi schemes, identity theft, and other sophisticated frauds frequently succeed in fooling unsuspecting victims.

Reports and research demonstrate how simple it is for fraudsters to register bank accounts in the names of innocent individuals by building fake websites or applications that resemble those of banks or payment firms. Consequently, users will enter their personal information, believing they are complying with a bank or fintech company's request.

Nowadays, it is extremely difficult to trace down fraudsters because they dwell in foreign countries and disguise their tracks using apps that obscure their true location.

In recent times, there have been numerous instances of fraud in the world of cryptocurrencies, particularly involving non-fungible tokens, where stolen or duplicated fake NFTs are being sold for substantial quantities of money. Additionally, there have been several breaches of individual accounts on currency trading platforms, and hackers have been able to compromise encrypted digital wallets via Phishing and deception.

On the other hand, there were many fraud cases related to lending-based crowdfunding platforms, where some platform administrators have engaged in misappropriation of collected funds and promotion of fictional projects.

5. Risks of increased money laundering and terrorist financing

The use of fintech services has raised the likelihood of money laundering and financing of terrorism. Where individuals construct fake businesses and utilize them to conduct commerce. In addition, users have the opportunity to conceal their identities, allowing them to transfer funds and utilize them for illicit purposes.

In fact, transactions can be conducted using anonymous networks. Consequently, many digital finance platform services may not be subject to the present AML/CFT regulatory regimes. Thus, it is difficult to prevent money laundering because it is still feasible to create new accounts on a regular basis, even if officials can detect a suspect account.

Experts seek to establish compliance measures to avoid unlawful actions and resist money laundering attempts as a countermeasure. But, skilled traders, particularly in the crypto tokens industry, have been able to circumvent sanctions and blacklists.

6. Third-party intervention:

The supply of essential operational services such as data storage, cloud computing, and analytics is reliant on external suppliers. However, working using new entrants or 3rd-party outsourcing providers exposes consumers' information.

Apple Pay and Google Pay are believed to have "front to back" service offerings in the financial payment industry. As a result, the financial online platforms must only engage with users, outsourcing the majority of the operation to third-party service providers. Thus, the threat of potential fraud will never go away entirely.

7. Business risks:

Decentralization, increased intermediation by non-financial institutions, good performance, openness, and competitiveness are all potential FinTech benefits, but the sector is also exposed to a number of financial and

operational risks that could be compounded by FinTech business models and jeopardize the provision of essential financial services.

If a FinTech lending platform encounters substantial and unforeseen losses, this would lead to contagion across the industry, and many businesses are susceptible to pro-cyclicality.

a. Contagion

“Contagion is characterized as a state of distress encountered by a single entity or sector that can spread to others due to their interconnectedness”. *

b. Pro-Cyclicality

Due to the involvement of retail investors on lending platforms, broad sentiment swings can be exacerbated, and social trading and robot advice may lead to herding behavior.

8. Financial stability threats

FinTech has a great impact on financial stability, therefore national authorities and international organizations must take it into consideration when conducting regulatory risk assessments and developing a regulatory framework.

According to the financial stability board, higher client expectations, developing technology, and changes in financial regulations and market structure have all contributed to the rapid rise of the FinTech industry. This quick growth has caused some companies to advance without the necessary risk management capabilities, while other companies may misunderstand the degree of risk they are taking on. Due to the high rate of innovation in this industry, authorities should always keep an eye on FinTech developments.

Conclusion

The use of innovative financial technology may come with both advantages and disadvantages. The improvement in operational efficiency and customer satisfaction in the financial services sector, as well as the rise in financial inclusion and economic development, have contributed to the expansion of many countries' GDPs. However, financial technology's risks and disadvantages should be carefully evaluated due to the lack of regulations, frameworks, privacy protection, consumer protection against fraud and cyber-attacks, third-party dependencies, money laundering, and terrorist financing concerns.

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