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The reality of fintech development and areas of its application

واقع تطوير التكنولوجيا المالية ومجالات تطبيقها

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Abstract

This research aims to shed light on the concept of financial technology and its importance in the financial and banking sector, as the new term (Fintech) is trading in the field of business and banking, which translates to financial technology, as it is the technologies used and applied in the financial services sector and includes its interference in mobile payment. Transfer money, loans, fundraising, and asset management.

Recently, investment in financial technology has increased significantly around the world, and is likely to continue to increase, given that financial technology is not related to the financial services sector only, but to all businesses that deal with the financial services industry, and fintech is described as Those products and services that rely on technology to improve the quality of traditional financial services, and are characterized by speed and ease, and in most cases these services and products are developed by emerging companies that seek to improve banking services for individuals and companies in cooperation or competition with providers Financial services.

Keywords : financial technology, financial services, investment, digital currencies, the financial and banking sector.

ملخص

يهدف هذا البحث إلى إلقاء الضوء على مفهوم التكنولوجيا المالية وأهميتها في القطاع المالي والمصرفي، حيث أن هذا المصطلح الجديد (*Fintech*) يهدف إلى المتاجرة في مجال الأعمال والمصارف، فالتكنولوجيا المالية هي مجموع التقنيات المستخدمة والمطبقة في قطاع الخدمات المالية، وتشمل تدخلها في الدفع بواسطة الهاتف المحمول، تحويل الأموال والقروض وجمع الأموال وإدارة الأصول.

في الآونة الأخيرة ، زاد الاستثمار في التكنولوجيا المالية بشكل كبير في جميع أنحاء العالم ، ومن المرجح أن يستمر في الزيادة ، نظرًا لأن التكنولوجيا المالية لا تتعلق بقطاع الخدمات المالية فقط، ولكن تمس نشاط جميع الشركات التي تتعامل مع صناعة الخدمات المالية، وتوصف بأنها تلك المنتجات والخدمات التي تعتمد على التكنولوجيا لتحسين جودة الخدمات المالية التقليدية، والتي تتميز بالسرعة والسهولة، وفي معظم الحالات يتم تطوير هذه الخدمات والمنتجات من قبل الشركات الناشئة التي تسعى إلى تحسين الخدمات المصرفية للأفراد والشركات، من خلال التعاون أو التنافس مع مقدمي الخدمات المالية.

الكلمات المفتاحية: تكنولوجيا مالية، خدمات مالية، استثمار، عملات رقمية، قطاع مالي ومصرفي

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1. INTRODUCTION

The current stage is a crucial stage for workers in the financial services sector, with this huge amount of technological innovations that have changed the way of doing business, transfer of money and daily transactions, the financial technology sector is one of the most prominent sectors that receive support from decision makers around the world. With the increase in the ability to bring about a technological revolution in this vital sector, and the more creativity and efficiency it witnesses to achieve prosperity and growth, it is not surprising that the expectations of investments in this sector reach 8 billion US dollars by the year 2018, due to the innovation of more sophisticated financial technology services. To meet the needs of the growing customer. Any country seeking to enter a new industry with growth and development, it must create an environment that helps startups and entrepreneurship to grow as well, because appropriate business systems help the emergence of global centers for emerging companies in the technology industry. Perhaps the main components of creating a positive environment are building the ecosystem and regulatory frameworks that make it easier to do business in a country or region

In the last ten years, the number of companies and projects that provide various financial and banking services that depend on modern technology has increased, and thus these companies have become a strong competitor in the services provided by traditional institutions such as banks and insurance companies, as well as means of payment, borrowing and transferring money, and this coincides with the development of financial technology today. Its growth has increased dramatically in the world. Many companies that provide innovative solutions in the field of financial and banking transactions have witnessed a remarkable increase, and traditional financial and banking institutions compete for a share of the market, especially after the global financial crisis that caused the collapse of many major financial indicators, in addition to that. The development of computer systems and artificial intelligence, which led to the emergence of a stand-alone industry that blends modern technologies and financial services, which is now a revolution in the financial sector and the banker, this research paper seeks to answer the following main question:

What is the reality of financial technology developments and their

fields across the world ?

❖ **Hypotheses :**

To answer the problematic of the research, the following two hypotheses were relied on :

- Fintech includes most of the companies that use modern technologies to provide innovative services and solutions in relation to financial services ;
- Fintech has witnessed tremendous development with the development of modern technologies and means of communication and their low cost.

❖ **Research importance :**

The importance of this research stems from the knowledge of the development in financial technology that swept the world, as the financial innovations provided through them contributed to raising the performance of financial and banking institutions by improving the quality of services provided to clients, and this is what makes financial technology a necessary requirement that should be adopted today in the financial sector and the banking in light of the changes in financial and banking transactions in the world.

❖ **The research aims :**

The aim of this research is to get acquainted with the latest developments that have affected financially technology today, to know its fields and the extent of its spread and to invest in it in the global environment.

The new developments, and the intensity of competition witnessed by the financial and banking sector in the world through modern financial and banking innovations.

❖ **Research plan :**

The research was divided into the following :

- ✓ Conceptual framework for fin tech and digital currencies;
- ✓ Areas of financial technology;
- ✓ Investments in financial technology and its challenges.

2. Conceptual framework for fintech and digital currencies:

FinTech is the merger of finance and technology. Technology has

always affected the financial industry, as technological developments have changed the way the financial industry operates, for example, the introduction of automatic teller machines or the use of digital transfers as major innovations. So what defines the current fintech revolution is the frequency with which new technologies are tested and included in a special edition. These help define an emerging financial technology field and perhaps most importantly, work to provide insights for the future of research at FinTech.

2.1 Fintech concept:

What is financial technology? At its core, financial technology is the use of technology to provide new and improved financial services. Part of the impetus for the rise of fintech is that while information technology has made everything - from computers to cars - cheaper and more efficient (Thakor, 2020, p. 3), it appears that the unit cost of financial intermediation has not changed much in more than a century. Whereas, the unit cost of financial brokerage in the United States has remained at around 2% for the past 130 years. Thus, one of the promises of fintech is to uncover cheaper ways to overcome financial contracting problems and reduce the cost of financial services to improve consumer well-being. (Douglas & all, 2016, p. 63)

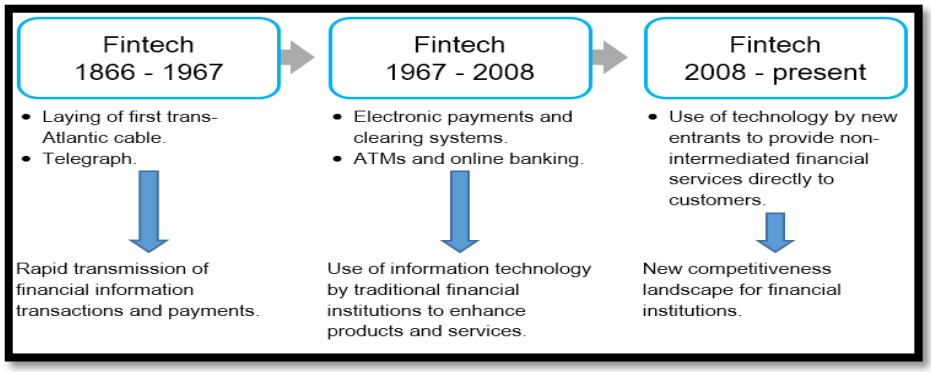
The areas covered by fintech can be broadly described as : (1) Credit, deposits, and capital raising services ; (2) Payment, clearing and settlement services, including digital currencies; (3) Investment management services (including trade); And (4) Insurance 4. Blockchain technology is a very important part of FinTech.

The use of this technology along with other technological advancement is intended to : (Berentseen, & Schar, 2018, p. 87)

- ✓ Lower search costs of matching transacting parties ;
- ✓ Achieve economies of scale in gathering and using large data ;
- ✓ Achieve cheaper and more secure information transmission ;
- ✓ Reduce verification costs

It has been suggested that there have been three phases of fintech and we are currently in the third phase.

Fig .1. The Three Phases of Fintech



Source : (Thakor, 2020, p. 4)

2.2 Digital Currency:

Digital currency is a form of currency that is available only in digital or electronic form, and not in physical form. It is also called digital money, electronic money, electronic currency, or cyber cash.

Digital currencies are intangible and can only be owned and transacted in by using computers or electronic wallets connected to the Internet or the designated networks. In contrast, physical currencies, like banknotes and minted coins, are tangible and transactions are possible only by their holders who have their physical ownership.

2.2.1 Type of digital currencies :

Digital currency is designed to work as a medium of exchange. There are many different types of cryptocurrency, but these some of the more well-known currencies.

- **Bitcoin (BTC)**: Bitcoin is one of the most widely used transactional currencies, as it is the original cryptocurrency. It was created in 2009 as open source software. The founder of this digital currency was under the pseudonym Satoshi Nakamoto. (Foley, J. R., & Putniņš, 2019, p. 1803)
- **Litecoin (LTC)**: Litecoin was launched in 2011 as an alternative to Bitcoin. Like other cryptocurrencies, Litecoin is a completely decentralized open-source global payment network, which means no central authorities.
- **Ethereum (ETH)**: Created in 2015, Ethereum is a type of cryptocurrency and is an open source platform based on blockchain technology. While tracking ownership of digital currency

transactions, the Ethereum blockchain also focuses on running scripting code for any decentralized application, allowing app developers to use it to pay transaction fees and services on the Etherem network. (https://coinmarketcap.com/fr/currencies/ethereum, 2021)

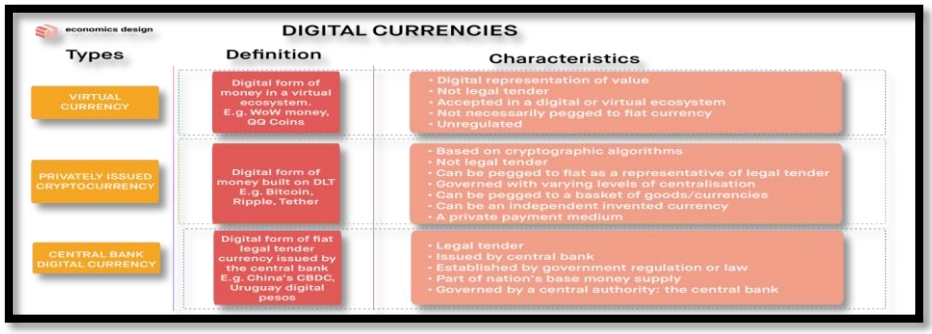
- **Ripple (XRP)**: It operates as a cryptocurrency and a digital payment network for financial transactions. It is a global settlement network designed to create a fast, secure and affordable way to transfer funds. Ripple was released in 2012.
- **Zcash (ZEC)**: Zcash is a digital currency that was built on the basis of the original Bitcoin code. It has been designed by scientists at MIT and Jones in collaboration with other respected academic and scientific institutions, and is built on a decentralized blockchain. And this currency is distinguished from other digital currencies by the distinction in Zcash and the focus on privacy. Although investors do not have a job on the Equity Trust platform, they can send and receive Zcash without disclosing the sender, recipient, or amount dealt with.

2.2.2 Difference between Digital, Virtual, and Crypto Currencies

Digital currencies can be thought of as a comprehensive set of virtual and cryptocurrencies. For example, if it is issued by the central bank of a country in an organized form and under the authority and supervision of the bank, then it is called in this case "the central bank digital currency (CBDC)" . While the CBDC exists only in theoretical form, that is, it is not realistic except in some countries such as England, Sweden and Uruguay, which are a few countries that have considered plans to launch these digital copies of their original paper currencies.

Along with the regulated CBDC, a digital currency can also exist in an unregulated form. In the latter case, it qualifies for being called a virtual currency and may be under the control of the currency developer(s), the founding organization, or the defined network protocol, instead of being controlled by a centralized regulator. Examples of such virtual currencies include cryptocurrencies, and coupon- or rewards-linked monetary systems.

Fig .2. types of digital currencies



Source : (Barrdear & Kumhof, 2016, p. 156)

Most economists will agree that the future of money will be more digital than today. But while everybody speaks of 'digitalisation', the concrete meaning of this term remains very often unclear. There are four major areas where digitalisation could modify the traditional forms of money and credit and as consequence modify the theory of practice of monetary policy:

- ✓ The substitution of cash with electronic money ;
- ✓ The substitution of traditional bank deposits and bank notes with cryptocurrencies;
- ✓ The substitution of bank deposits with central bank deposits for everyone ('universal reserves') ;
- ✓ The substitution of bank lending with peer-to-peer lending on the basis of digital platforms.

3. Areas of financial technology:

We divide them here into three groups : (i) the applications of the blockchain in business and finance ; (ii) technology in financial services (including peer-to-peer lending, online lending, and Robo-advising) ; and (iii) the use of big data in finance.

3.1 Blockchain mechanisms

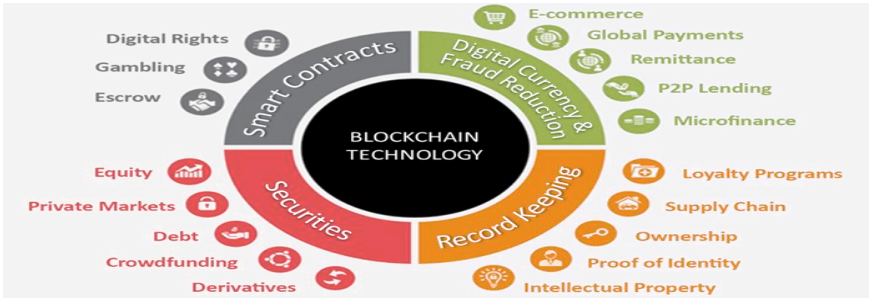
Blockchain : a decentralised digital ledger of economic transactions that can be programmed to record financial transactions (and more) by allowing digital information to be distributed but not copied or changed. Data packages, 'blocks', are stored in a linear chain. This technology was originally devised for the digital currency Bitcoin, but today presents other potential uses**.** (manta, 2018, p. 80)

Blockchains are distributed ledgers, operated within peer-to-peer

networks to offer a decentralized way to verify ownership or to exchange ownership securely and efficiently. In finance, blockchains can be used for money transfer and distributed computing, as well as representing securities or other assets. Blocks" on the blockchain are made up of digital pieces of information. Specifically, they have three parts : (Biais, Bisière, & Casamatt, 2019, p. 703)

- Blocks store information about transactions like the date, time, and dollar amount of your most recent purchase from Amazon. (NOTE: This Amazon example is for illustrative purchases; Amazon retail does not work on a blockchain principle as of this writing)
- Blocks store information about who is participating in transactions. A block for your splurge purchase from Amazon would record your name along with Amazon.com, Inc. (AMZN). Instead of using your actual name, your purchase is recorded without any identifying information using a unique "digital signature," sort of like a username.
- Blocks store information that distinguishes them from other blocks. Much like you and I have names to distinguish us from one another, each block stores a unique code called a "hash" that allows us to tell it apart from every other block. Hashes are cryptographic codes created by special algorithms. Let's say you made your splurge purchase on Amazon, but while it's in transit, you decide you just can't resist and need a second one. Even though the details of your new transaction would look nearly identical to your earlier purchase, we can still tell the blocks apart because of their unique codes.

Fig .3. Blockchain applications



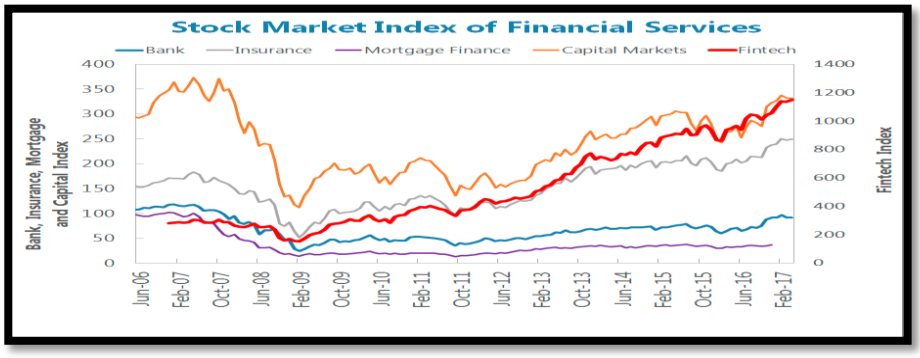
Source : (Yaga, Mell, Roby, & Scarfone, 2018, p. 105)

3.2 Technology in financial services:

Operation are a key feature of financial services including systems design, performance, analysis and productivity, forecasting, inventory and cash management, waiting line analysis for capacity planning, personnel scheduling, (Fenwick, McCahery, & Vermeulen, 2017, p. 78) operational risk management, and pricing and revenue management Key components of financial services operations include high volumes and significant customer heterogeneity, repeated services interactions, and use of technology in the service encounter. The new fintech approaches are changing all of these things in dramatic ways: by creating a new basis for harmonizing investments across business partners and competitors too; through the new availability of products and services that have a different operational basis, with diminished human involvement on the purely transactionsal aspects, supported by machine

Fintech firms have attracted substantial investment in recent years, while public interest has grown significantly. Most firms have remained small—reflecting their knowledgebased business model—but investment in them has risen substantially. Total global investment in fintech companies reportedly increased from US$9 billion in 2010 to over US$25 billion in 2016.Venture capital investment has also risen steadily, from US$0.8 billion in 2010 to US$13.6 billion in 2016. Market valuations of public fintech firms have quadrupled since the global financial crisis,outperforming other sectors. Meanwhile, public interest in the sector seems to have grown exponentially (Figure 4). (He & all, 2017, p. 8)

Fig. 4. Asset Prices in Financial Services and Search for New Technologies

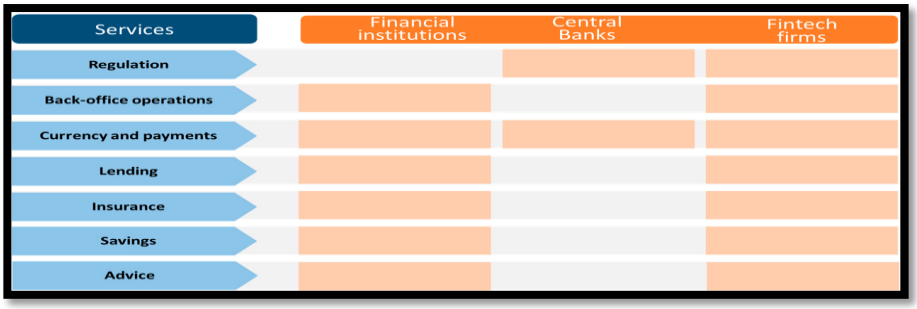


Source : (He & all, 2017, p. 9)

Conceivable that the full range of services currently offered by banks,

central banks, and certain market infrastructures could be at least partly supplanted by new entrants, automated processes, and decentralized networks (Fig.5). The increased competition is forcing incumbents (banks and non-banks) to react by adopting new technologies, improving service offerings, altering business models, and reducing costs. (He & all, 2017, p. 9)

Fig.5. Financial Services Architecture : Old and New



Source : (International Monetary Fund , 2017)

The last decade has witnessed the rapid development of a broad range of technological innovations. As illustrated in Figure6, these have benefitted from advancements in fundamental technologies, and are giving rise to new applications in all functions of finance, from making payments, to saving, borrowing, managing risks, and getting financial advice.

- ✓ **Artificial intelligence (AI) and big data capture** : the parsing of vast databases containing the characteristics and transactions of billions of economic agents through advanced algorithms to derive patterns used to predict behavior and prices, and in the end mimic human judgement in automated decisions. (Mersch, 2017, p. 16)
- ✓ **Distributed computing :** has permitted a jump in computing power and stability by linking (or networking) individual computers. Distributed ledgers have recently emerged as a key technology supporting multiple applications . The potential exists to

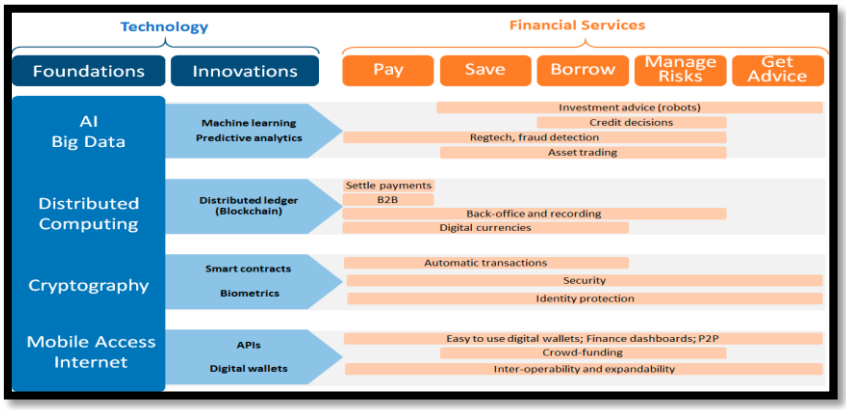
transform payments and securities settlement as well as back-office functions by substantially cutting costs, allowing direct business-to-business transactions bypassing intermediaries, and offering currency substitutes

- ✓ **Developments in cryptography :** have facilitated a variety of applications including smart contracts (a set of promises specified in

digital form, to be executed following certain procedures and if certain conditions are met—such as selling an asset at a certain price), and have combined with sensing technologies and biometrics to create more robust security systems. (Nicolaisen, 2017, p. 25)

- ✓ **Mobile access and the internet** have been transformational, allowing the gains from technological progress to be shared directly with billions of individual consumers whose mobile devices are now portals for accessing a full range of financial services

Fig. 6. Major Technologies Transforming Financial Services



Source : (International Monetary Fund , 2017, p. 33)

3.3 The use of big data in finance:

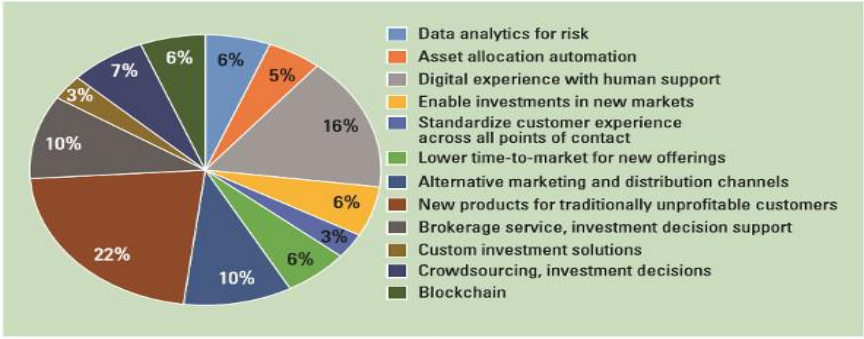
"Big data" refers to data sets that are too large or complex for traditional dataprocessing application software to deal with adequately, but that are powerful in revealing patterns, trends, and correlations (Andreasen, Christensen, & Rudebusch , 2019),and applied big-data techniques to provide new insights to FinTech-related research questions.Recent technological and computing advancements have enabled collection of granular indicators of the fundamentals of firms, such as real-time transactions and satellite images of traffic in the parking lot of a big-box store.Such data are of interest to investment professionals, and the information may thus find its way into stock prices. (Barr & all, 2018, p. 71)

Big data is an emerging issue in almost all areas of business. Especially in fnance, it efects with a variety of facility, such as fnancial management, risk management, fnancial analysis, and managing the data of fnancial applications. Big data is expressively changing the business models

of financial companies and financial management. Also, itis considered a fascinating area nowadays. In this fascinating area, scientists and expertsare trying to propose novel finance business models by considering big data methods, particularly, methods for risk control, financial market analysis, creating new finance, and setting up information-based tools in different creative ways

However, banking is among the top industry sectors investing in big data analytics, Moreover, financial technology, or FinTech, companies are developing solutions and products for a range of banking needs for asset and wealth management; breaks out the proportion of FinTech companies per area a. Following this trend, there is a growing body of research and algorithm development around other uses of financial data for increasing business effectiveness. We next examine a few of these.

Fig .7. The market for big data analytics



Source : (Blackburn & all, 2017, p. 22)

4. The reality of fintech across the world and its challenges

The total value of investments into fintech companies worldwide increased dramatically between 2010 and 2019, when it reached 215.4 billion U.S. dollars. In 2020, however, fintech companies saw investments drop by more than one third, reaching a value of 121.5 billion U.S. dollars. (statista, 2021)The rapidly growing FinTech sector has its rewards and challenges, and is increasingly attracting political attention The following will be discussed in this axis :

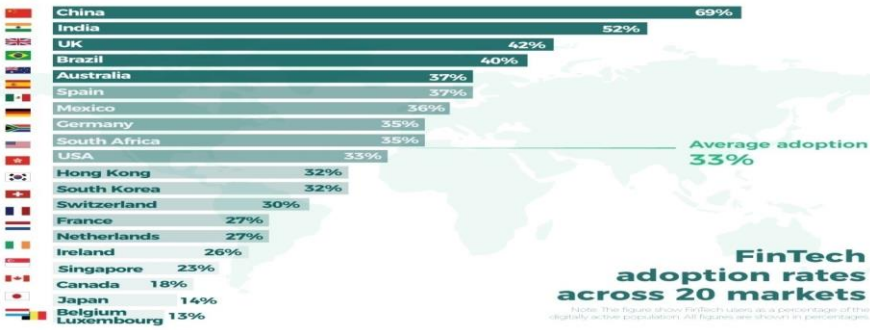
4.1 Fintech development in the world:

The recent technological revolution has affected the information field and the financial and economic sphere at the same time. Significant changes

in the financial sector are closely related to the need to reduce costs, improve the security of financial transactions, and ensure that the service sector is in line with an ever-evolving society. And customer demands in the banking industry.

Financial technologies play an important role in this, as they enable them to create new types of agreements and procedures in traditional banking, such as lending, capital management, transfers and payments, and fintech is usually shortened to financial technology. Financial services used in the creation and use of modern digital technologies. Fintech is "computer programs and other technologies used to activate or support banking and financial services". Fintech has spread to nearly all markets in the world, but emerging markets are pioneering their adoption of these technologies. The proportion of China (69%) and India (52%) was estimated. China, India, and other emerging markets did not have time to develop to Western countries' levels of physical banking infrastructure, making them more open to new solutions. In the case of China, for example, fintech penetration is much higher than the global average adoption (33%) in addition to the average adoption across emerging markets (46%). (Cortina & Schmukler, 2018, p. 188)

Fig .8. Fintech in Emerging Markets



Source (https://www.e-zigurat.com/innovation-school/blog/evolution-of-fintech, 2021)

Technological progress has given a great impact on the development of many areas of Fintech (financial technologies) – like mutual crediting, non-bank loans, deposits, accounting systems, personal finance, individual investments, crowdfunding, payments, researches, financial advice, and even use of cryptocurrency.

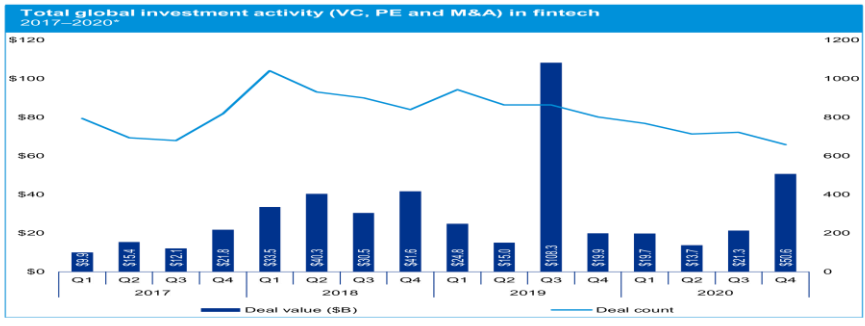
Actually, Fintech is all around us. Fintech's benefits include flexibility (the ability to respond immediately to changes in market demand), innovations, and the ability to attract customers who like to use technologies. Fintech services are used by those who prefer speed, convenience, and ease of use of the service.

4.2 Growth in investment fintech :

Investments in Fintech's reached a new record last year. A whopping $112 billion was pumped into innovative companies that pursue technological innovation in the financial sector, a sharp increase compared to the $51 billion in the previous year. (Schindler, 2017)

The stellar growth globally is in large part the result of three mega deals of more than $ 10 billion: the $17 billion investment by Blackstone in Refinitiv, the $13 billion acquisition of UK's WorldPay by Vantiv, and the $14 billion capital funding raised by Chinese firm Ant Financial. The data stems from KPMG's latest report on the FinTech investment landscape, which looks at investments of all sizes and across all stages, from venture capital and seed funding rounds to private equity and mergers & acquisitions.

Fig .9. Total investment in fintech



Source: Pulse of Fintech H2'20, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook), *as of 31 December 2020.

Source : (KPMG International, 2021, p. 10)

After the global pandemic brought many deals to a halt in H1'20, H2'20 reversed the trend as investors and fintechs learned to do business in a new normal.

Fintech investment dropped from US$168 billion in 2019 to US$105 million in 2020, in part due to the lack of mega M&A deals like 2019's US$42.5 billion acquisition of WorldPay by FIS. After a soft start to the year, H2'20 saw US$71.9 billion in fintech investment across global M&A,

PE and VC deals — more than double the US$33.4 billion seen in H1'20.

Amidst the pandemic, fintechs attracted US$42.3 billion in VC investment, in a year that ended second only to 2018 — when Ant Financial raised US$14 billion in the world's largest private financing round ever. US-based wealthtech Robinhood attracted the largest VC investment in H2'20, raising US$1.3 billion across two deals in H2'20: a US$600 million raise in July and a US$668 million raise in October. (KPMG International, 2021)

4.3 FinTech's laws and challenges for regulators :

In general, there are two FinTech rules - based rules and rules basic principles. Rules-based rules create clear rules and processes, compliance obligations are clearly established, but this may limit the incentives for the supervised entity to do more because the obligations are perceived as sufficiently comprehensive. (Guild, 2017). From a start-up perspective, this approach is often costly, as every rule and process needs to be identified and respected. Modelbased principles are flexible, but could create a level of uncertainty as to what exactly compliance is expected to be. Some experts argue that regulators should remain technologically neutral and concentrate on the outcome of technology.

Fig. 10. Regulations based on regulatory regimes

Rules-based regulatory regimes		Principles-based regulatory regimes	
Potential positives	Potential negatives	Potential positives	Potential negatives
Certainty and predictability, including with respect to future enforcement	'Check-box' forms of compliance that strategically evade the underlying purpose of the regulation	Executive-level management involvement in incorporating regulatory principles into business models	Uncertainty and the risk of unpredictable post hoc application or arbitrage
Clear communication of steps for compliance	High internal costs of compliance	Flexibility and innovation in the face of 'rapidly changing environments'	Concerns over fairness/bias in application
Ensures specific behaviour	Deterrence with respect to innovation	Speed in the regulatory process	Inadequate deterrence of specific problematic behaviour or activities
Uniform treatment of regulated entities	Frequent disconnect between the purpose of the regulation and the actual regulatory outcomes	The centrality of guidance and evolving norms/best practices	Over-reliance on current norms and practices
	Obsolescence		

Source : (Karakas & Stamegna, 2018, p. 92)

Until recently, regulators have been relatively impartial. Instead they have concentrated on the outcome of the application of fintechs in the finance domain (maybe quite rightly): for how does one regulate an

instinctively inquisitive learning mechanism from learning? What are the risks behind such an innovative change and ceding too much control to technology too soon? (Arner, Barberis, & Buckley, 2017, pp. 371-372)The regulatory 'waitand-see' approach as argued above affords the regulator the opportunity to observe and learn of the potential risks technology generates. regulation is slow because regulation is fact-based, it is a trial-and-error-rulemaking process with stable and presumptively optimal rules, and it always emerges ex-post. At the same time, in a fast-paced, technology-led environment that makes money move a lot faster important systemic risks include: (Dirk & all, 2017, p. 156)

- ✓ Fast scalability and speed of matching and loan originations; fast credit has the potential to undermine loan-to-value (LTV) caps and hence increase credit risk in the market;
- ✓ Liquidity risks emerging from either faster maturity mismatching in money market funds or exponentially simultaneous unexpected withdrawals of retail funds on demand;
- ✓ Capital requirements quickly becoming irrelevant or inappropriate;
- ✓ cultural, knowledge, and incentives gap between fintech specialists on the one hand and regulatory agencies on the other;
- ✓ uncertainty surrounding the development potential and dynamic of the market from an entrepreneur's point for venture capital;
- ✓ the regulatory domain traditionally does not synchronise well in pace with other exoteric, fast-changing environments such as hi-tech and artificial intelligence by nature. It rather encompasses slow cultural and gradual customary change since this may have considerable behavioural repercussions, resistance and scepticism of how to steer and ingrain a changed code of conduct percolating through the institutions it seeks to regulate.

4. CONCLUSION

Fintech offers many potentials and advantages, but an enabling environment must be provided, such as providing appropriate regulations for the work of emerging companies in this field, in addition to information security and provision of information and communication technology infrastructure, and the development of financial technology depends on reviewing legal frameworks. And supervision, in particular, the clarity of

laws related to trading : digital financial products and managing the risks that arise from the new financial and banking products and services, and through research, the following was reached :

- ✓ Financial technology is the most appropriate tool to provide innovative services and solutions in relation to financial services provided by traditional financial institutions, banks and insurance companies in a world characterized by speed and change ;
- ✓ Crowdfunding services are among the most advanced branches of financial technology. They enable the provision of sources of financing for entrepreneurs, while providing investors with the opportunity to participate in companies that may have a prosperous future;
- ✓ Despite the multiple advantages of financial and banking technology that greatly serve the financial and banking sector, there have been risks associated with the use of this technology by banks and financial institutions that would cause great harm to these institutions if they were not discovered and addressed in a timely manner ;
- ✓ The need to establish protection systems, especially those related to protection against any kind of cyber attacks, which require regulatory frameworks for information security and information exchange.

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