P2P lending Platforms as a Paradigm for FinTech Role in Fostering Financial Inclusion

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Abstract:

By presenting two major experiences in the field of peer-to-peer lending, this study intends to illustrate the role of financial technology in promoting financial inclusion by providing complementary financing choices that suit varied conditions.

The study demonstrates the significance of P2P lending platforms in bridging the funding gap that occurred in the wake of the 2008 financial crisis, as well as their contribution to promoting financial inclusion and supporting digital finance, which would assure long-term financing.

Keywords: Fintech, Peer-To-Peer Lending, Financial Inclusion, Digital Finance.

Jel Classification Codes: G00, G23, G59.

1.Introduction:

During the last decade, the financial technology sector has witnessed a revolution in the field of global financial systems, as it has evolved to offer new, distinct financial products and services that compete with traditional financial ones at the lowest possible cost and with the greatest possible speed.

Global investments in the financial technology sector have grown rapidly in recent years, with their worth growing more than tenfold between 2012 and 2020, with a 120 percent rise compared to 2019.

P2P lending platforms are a type of modern financial technology that has emerged as an alternative financing instrument due to the benefits it offers to its customers.

moreover, due to the tight link between financial inclusion and financial stability on the one hand, and economic growth on the other, financial inclusion has been a focus of attention for many governments and regulatory bodies. The amount of financial inclusion promotion is also tied to the capacity to generate new and suitable financial products that improve society's access to all categories and segments of finance.

1.2. Study problem:

The problem of this study can be formulated in the following main question:

What role do peer-to-peer lending platforms play in advancing financial inclusion?

The following sub-questions fall under this problem:

- What exactly does the term "financial technology" imply?
- What are Peer-to-Peer Lending Platforms? How does it work?
- How do peer-to-peer lending platforms make diverse financial services more accessible?

1.3. Hypotheses:

The study is based on two main hypotheses:

- Effective use and mastery of financial technology is fundamental for financial inclusion.
- P2P lending platforms are a suitable option if traditional financial services are unavailable or difficult to obtain.

1.4. Objectives of the study:

Through this research, we aim to:

- Monitor and highlight the issue of peer-to-peer lending platforms, particularly since we do not deal with them in Algeria.
- Emphasizing the critical significance of financial technology in the development of the financial industry.

1.5. Research importance:

The significance of the subject of this study is reflected in the importance of the financial technology sector in its various fields, as well as in the new solutions it offers to the financial sector in order to improve the efficiency and effectiveness of its operational processes. And to enable a wider base of customers to access to its services and products, particularly those who have difficulty accessing banks and their branches.

1.6. Study Approach:

The research relies on the descriptive and analytical approaches by giving the theoretical framework of the topic and incorporating some foreign experiences with statistics and analysis to support the theoretical side of the study.

1.7. Study Structure:

The study was divided into the following topics to address the problem:

- Financial technology
- P2P Lending Platforms
- P2P Lending Platforms and Financial Inclusion (International Experiences)

1.8. Previous studies' literature:

Among the previous studies, we mention the following:

1.8.1. A study conducted by **Pankaj Kumar Maskara et al**. (2021) entitled **''The role of P2P platforms in enhancing financial inclusion in the United States: An analysis of peer-to-peer lending across the rural–urban divide''**: showed that in rural communities, P2P loan applications increase with the decrease of banks branches, when at least one bank branch in the community allows individuals to participate in the P2P market. They also found that the number of P2P loan requests from urban areas was higher when there were fewer pawnshops per capita in urban areas. They also demonstrated that P2P lending promotes financial inclusion for those in rural communities (Pankaj & Emer, 2021).

1.8.2. Ming Jin et al.(2021) conducted a study entitled ''Do investors prefer borrowers from high level of trust cities? Evidence from China's P2P market'': The study explores the effects of trust on individuals' access to the (P2P) lending market. It showed that borrowers from cities with high trust have high borrowing success rates, implying that lenders prefer high social trust. The study also revealed that fairness plays a consistent role with trust, whereas happiness plays an opposite role (Ming, Mingmei, & Zhongfei, 2021).

1.8.3. A study conducted by **Angela Tritto et al.(2020)** entitled **''Governing the gold rush into emerging markets: a case study of Indonesia's regulatory responses to the expansion of Chinese-backed online P2P**

lending'', a case study of the Indonesian government's approach to regulating the P2P lending sector. As a result of tighter restrictions in China and loopholes in Indonesian legislation, Chinese investment has become the largest in the P2P industry, but it has also increased the risk of illegal business practices. The Indonesian government has responded to these risks by creating new regulations and institutions that do not stifle the potential of financial inclusion. The study concluded conclude that an active approach to monitoring and regulating emerging high-tech industries should be pursued (Tritto & He, 2020).

1.8.4. A study conducted by **Ravishankar (2021**) entitled **''Social innovations and the fight against poverty: An analysis of India's first prosocial P2P lending platform''** : This study explores how pro-social P2P lending platforms achieve their hybrid positioning. It is based on inductive qualitative analysis of Rang De, India's first Pro-Social Lending Platform. The paper argues that significant online advantages can help build sustainable business models. The willingness and commitment to engage deeply with the complex offline world of low-income borrowers helps develop this model into a powerful social innovation (Ravishankar, 2021).

2. Financial technology

It is apparent that technology growth has a significant impact on financial services, which have a favorable impact on individuals' everyday lives, beginning with payment facilitation and ultimately reaching a complete digitalization of financial services. In this section, we shall attempt to address the subject of financial technology.

2.1. Definition of Financial Technology (Fintech)

The term "fintech" is an abbreviation for "financial technology." The word was originally used in an article in Interfaces magazine in 1972, titled "Fintech Series 40 Models of Time Sharing Used by Hanover Trust Bank." In his work, the author defined fintech as an abbreviation. Financial technology that integrates banking experience with cutting-edge management and computer science methodologies (Abraham, 1972, pp. 62-63). The Institute for Digital Research in Dublin, Ireland, describes it as "inventions and current technical advancements in the financial industry." These innovations included a collection of computer programs used in bank financial operations, such as client transactions, financial services, money transfer, currency exchange, interest accounts, profits, and other banking activities (حرفوش، 2019).

It is also known as: A word that refers to the level to which businesses are able to supply contemporary and innovative financial services and technology to clients on a large scale, where these services are distinguished by convenience and reasonable rates (زواويد، 2021).

2.2. Fintech innovations

Fintech has completely revolutionized the financial services industry, thanks to its innovative nature, with the most important of these innovations being: Blockchain, Big data, Cloud Computing, Artificial Intelligence (AI), Internet of Things (IOT), The Robo advisor and P2P Lending.

The Kuwait Foundation for the Advancement of Sciences identified the most important of these innovations as follows:

- **Blockchain:** Software that was originally the algorithm that supports Bitcoin, also known as distributed digital ledger technology, which is effectively a shared record of information maintained and updated by a network of computers.
- **Big Data:** Data collections that are too huge and complicated to process using typical data processing software.
- **Artificial intelligence:** is a branch of computer science that teaches robots to learn from experience, adapt to new inputs, and perform human-like activities by digesting massive quantities of data and identifying patterns in it.
- **Automated Advice:** Financial advice provided by computer algorithms or automated advisors.
- **Direct lending without an intermediary:** Direct lenders, sometimes known as social lenders, run websites that allow borrowers to get loans directly from lenders (مارمور، 2019).

Fintech is predicted to deeply alter the financial industry through these and other innovations, leading to more efficiency, flexibility, and quality at reduced prices (Mohamed & Ali , 2018). These innovations are used in a variety of fields, including: Payment Services, Planning consulting services and agencies, Investing and Trading, Lending and Financing, Insurance, operations (transactions) and Telecommunications (مارمور، 2019).

3. Peer-To-Peer (P2P) lending platforms

When discussing peer-to-peer lending, another topic, must be mentioned wish is crowdfunding, as the two are genuinely connected. Peer-to-peer lending is a subset of crowdfunding, which is a financial technology product.

3.1. Crowdfunding

Crowdfunding is a unique method of financing that mostly targets small projects and Startups, since it offers them with excellent marketing possibilities by allowing them to communicate directly with customers and encourage them to invest in them.

3.1.1 Definition of crowdfunding

It is project financing that occurs online, relying on relatively small contributions from a large number of people. Collaborative process via a platform that brings together investors and entrepreneurs who need to finance their projects without the usual financial institutions, and the financiers receive a reward or the interest or percentage of the projects profits (صاري، 2021).

3.1.2. Crowdfunding Models

3.1.2.1. Donation-based Crowdfunding

Also known as Patronage this model is based on donors pledging small donations in return for minimum awards, benefits, or just to show support for a certain project. Typically, entrepreneurs show an initial prototype and ask for funds for further development or mass production. This model is usually associated with a very small risk from the entrepreneur's side, but many times, it ends up raising a small capital. This form of financing is divided into:

- **Donation-based Crowdfunding:** through this model, crowdfunding campaign funds are collected with the aim of participating in charitable projects, to support disaster relief efforts and participation in non-profit organizations, so that donations are accepted from a large number of individuals in small percentages, and they can share funds for social causes. Since in this type of crowdfunding, investors do not expect a financial return, there is no investment risk (Usha, 2014, p. 51).

- **Reward-based Crowdfunding:** In this type of crowdfunding, the investors get rewards for their investment, and they do not benefit from any financial return. The rewards may be in the form of a product or service provided by the company as a token gift. Companies offer different types of rewards and incentives in order to convince and attract investors. This type of crowdfunding is more popular due to the intrinsic value of crowdfunding participation, social reputation and shared identity (Melissa, 2017, p. 24).

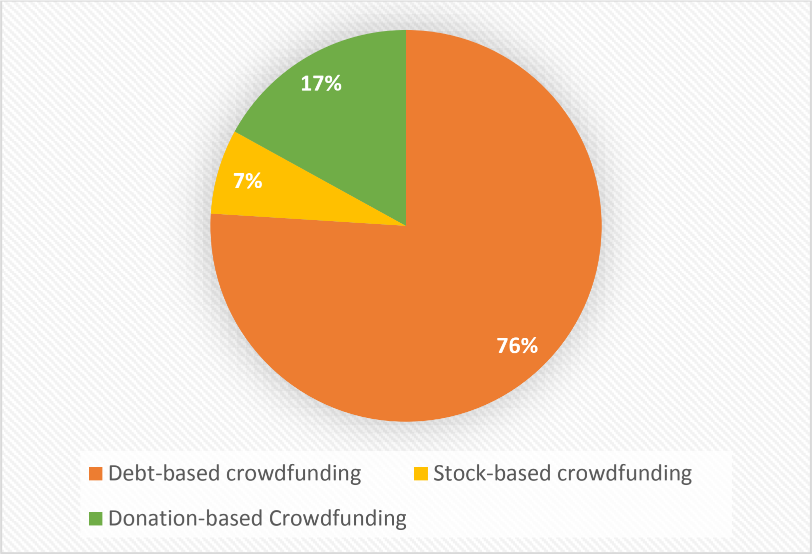
3.1.2.2. Crowdfunding Investing (CFI)

When entrepreneurs are in need of a serious investment after passing the initial prototype phase and they want an alternative for traditional VCs, many launches a Crowdfunding campaign to get a „Crowd‟ of investors on board. Those investors provide cash in return for equity in the business (Equity Crowdfunding) or as a debt (Debt Crowdfunding). In rare cases, the crowd follows a royalty-based model where they get a percentage of revenue (Royalty-based Crowdfunding). Being riskier and less common than the Donation-based model. CFI offers significant capital for entrepreneurs to develop their startups and a long-term relation between entrepreneurs and investors. Eureeca is an example of a platform following this model (Abushaban, 2014, p. 444).

- **Stock-based crowdfunding:** Through this, model investors get shares in the company that chooses this type of crowdfunding to increase its capital. The shareholders receive a financial return on their investments and a share of the profits, and it should be noted that each country has special regulations governing the work of investments through platforms Equity crowdfunding (Usha, 2014, p. 51).
- **Debt-based crowdfunding:** In this type of crowdfunding, companies apply for debt from debt-based crowdfunding platforms. While the platform reviews the companies' application, and launches it online for funds, so that the online application includes the interest rate on the Company. The credit period and the risks involved in the securities or bonds offered for sale, and in exchange for the securities, the investors

receive interest on these unsecured loans, and the company repays the debt after a specified period.

Fig.1. Distribution Ratios of Crowdfunding by Model



Source: صاري, 2021, 97

3.2. Peer-To-Peer (P2P) lending

3.2.1. Definition of Peer-To-Peer (P2P) lending

Peer-to-peer or person-to-person lending ("P2P lending") is a sort of crowdfunding that includes linking borrowers directly to lenders or investors via an online platform, allowing loans to be created outside of the traditional consumer banking system.

The use of Internet P2P lending platforms reduces costs by eliminating many of the operational expenses associated with traditional consumer bank loans, such as the cost of maintaining physical branches, which is reflected positively on the cost of the loan for borrowers through lower interest rates than those offered by traditional banks.

P2P lending services often make loans ranging from $1,000 to $35,000 with set interest rates and durations ranging from three to five years. P2P lending systems assign a borrower's minimal credit score based on specified creditworthiness criteria (Eiger & Jeremy, 2018).

3.2.2. The origins of the term "P2P"

The meeting or interaction of two or more persons without the need of a central intermediary is referred to as peer-to-peer. The phrase arose in the field of computer networking to describe a network in which any machine on the network may operate as a client or a server for other computers on the network without needing to connect to a central server. The Internet is a peer-to-peer network.

The expansion of the Internet and its potential to promote intermediation among its users has resulted in the formation of a subset of more specialized P2P activities. The first large-scale such activity was peer-to-peer file sharing, which was adopted around the turn of the millennium and allowed users to communicate directly with other users on the network in order to share files such as photos, music, movies, and game files by installing necessary software on their computers (Miline & parboteeah, 2016).

3.2.3. Peer-to-peer lending history

Personal lending has a long history, with individuals lending to one another dating back to the dawn of recorded history. Shopkeepers sell on credit, sovereigns borrow from their subjects, and citizens lend money to friends in need.

Peer-to-peer lending introduced a new technique to financing new businesses and projects. The first peer-to-peer platform, "Zopa," was developed in the United Kingdom in 2005, shortening its name from the phrase "zone of probable agreement," a negotiation term that specifies the parameters within which two parties might achieve an agreement (Martin & Kai, 2020). The idea was taken to the United States of America in 2006, when the Prosper platform was founded, and these platforms continued to grow day by day.

The key difference between modern P2P lending and prior personal lending is that borrowers and lenders do not need to know each other, and financial transactions are based on mutual trust, but creating trust is difficult and costly. As a result, most financial transactions were done between members of the same group.

These constraints have been removed by online platforms by offering credit ratings and creating means to limit the risk of nonpayment, which would not have occurred under the previous system (Martin & Kai, 2020).

3.2.4. Types of loans traded in P2P lending platforms

Given the enormous number of P2P lending platforms, they can be divided into four major groups based on the type of loan transacted on these platforms (Eugenia, 2018):

- **General loans:** General loans are the most common type of loan that consumers and lenders deal with on online lending platforms. When both borrowers and lenders pay fees, the platform allows lenders to meet online borrowers and exchange money. These loans are classified as unsecured since they are not secured by the borrower's collateral.
- **Global Poverty Reduction Loans:** The goal of this loan category is to reduce global poverty. Loans are typically given to people of third-world nations, particularly entrepreneurs, based on their capacity to repay the loan. Typically, a Field Partner acts as an intermediary between the lender and the borrower. The interest rate collected by lenders is normally fixed up front and is not high; also, many of these platforms are non-profit organizations and earn a tiny fraction of the interest payments provided by the borrower, mainly to run its infrastructure.
- **Family and Friends Loans:** These types of loans are disbursed from a family member to a relative, and are usually governed by the same rules that govern regular loans. Some internet platforms have been created specifically to service these types of loans, where both borrowers and lenders belong to the same family or group of friends, and once the interest rate that the borrower must pay on the requested loan is set, the online platform steps in to institutionalize the loan. Only In certain situations, these organizations also provide additional products to participants, such as private accounts or loans, which bridge the gap between what the borrower needs and what the lender provides.
- **Other types of loans:** There are three other types of loans

  - Business loans: In this case, the loan is frequently classified as "p2c": people to corporation, because the lender intends to benefit from his corporate loan.

- Platform loan: A loan provided by the platform itself, as well as various financial products that frequently produce superior financial returns than their equivalents in banks.

- Student loan: intended specifically for students in order to assist them in completing their university studies without financial constraints, the loan is frequently signed by an adult (a parent) who guarantees that the loan payments are completed on time.

3.2.5. How Peer-to-Peer Lending Works

The following steps are often included in the peer-to-peer lending process (Eiger & Jeremy, 2018):

- A potential borrower submits an application to the platform for consideration before the loan is publicized on the platform's website.
- The platform receives a credit report on the applicant and utilizes it, together with other data (for example, loan features), to give a risk rating to the requested loan and determine an interest rate that fits the risk profile stated.
- If a loan application is approved, it is posted on the platform's website, where investors can assess all loans or search for specific loans that fulfill the requisite risk/return criteria.
- If there are enough investors to finance the loan (typically, a single loan is divided into several parts to allow investors to diversify their portfolios and spread the risk of default among multiple investors), the loan is created by the bank (the "original bank"), and its deposits are insured by an insurance company.
- The originating bank then sells the banknotes connected with the specific loan to the platform, which sells the banknotes to each lender who has pledged to fund the loan in the principal amount of that commitment at the same time.
- The platform's notes (also known as "borrower-based securities") are secured by the principle loan, which implies investors will only be reimbursed through the platform if the primary borrower repays the debt.
- Before lending the remaining profits to the principal borrower, the platform collects a loan charge, as well as set-up and servicing costs.

3.2.6. The Benefits and Competitive Advantages of Peer-to-Peer Lending

Advantages offered to borrowers:

- Lower interest rates on average and at a lower cost than those imposed by traditional banks.
- The ease of using online platforms and the speed with which transactions are completed.
- Platform transparency achieved by standards and borrowing terms that are fully publicized.
- The use of technology to analyze and assign risk ratings and interest rates to make successful judgments.

Advantages offered to investors:

- Outperforms the bank in terms of risk-adjusted returns.
- Reaching huge investment categories by expanding the ability to invest in a big number of projects in a short period.
- Transparency and independence in the loan selection process (through the ability to examine each loan at an accurate level before investing, including providing credit scores for each borrower, and monitoring loan performance in real time).
- Simple access to credit profile information for each accepted loan (Eiger & Jeremy, 2018).

3.2.7. Risks Associated with P2P Lending

Although peer-to-peer lending has many advantages for both investors and borrowers, there are a few things to keep in mind. In general, investors face more risk than borrowers in P2P lending since traditional borrower safeguards do not apply to P2P lending platforms. Investors in peer-to-peer lending, like all other forms of funding, face a number of risks, including non-payment risk, interest rate risk, liquidity risk, and regulatory risk.

Risks associated with peer-to-peer lending networks include (Eiger & Jeremy, 2018):

- Inefficiencies in P2P lending platforms' proprietary risk recording forms.
- An increased risk of fraud owing to the anonymity involved with internet lending.
- P2P lending systems have a limited working experience.

- Limited financing source diversity for P2P lending systems.
- To drive bigger transaction volumes, P2P lending platforms rely on low interest rates.
- No share of the underlying loans originated by P2P lending platforms is carried on their balance sheet (unlike traditional lending).
- P2P lending platforms are not required to reimburse investors if borrowers fail to make basic loan payments, and they do not share the risk of borrower default with investors.

4. P2P Lending Platforms and Financial Inclusion (International Experiences)

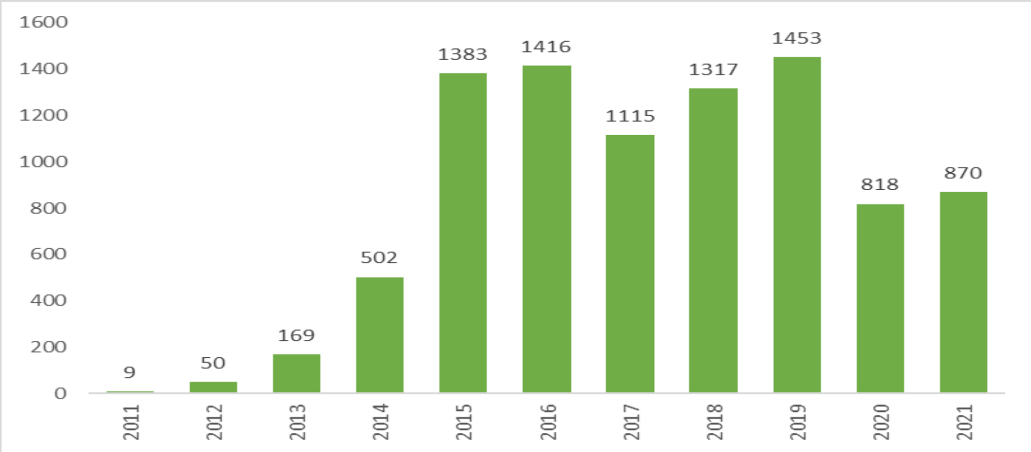
In this section, we highlight P2P lending platforms in the United States and China during the previous decade as the world's two largest P2P lending marketplaces.

4.1. United States of America

With the introduction of Prosper and Lending Club in 2006, the United States of America was one of the first countries where P2P lending platforms surfaced, and the two platforms now dominate 90 percent of the P2P lending industry in the United States of America (Pankaj & Emer, 2021). Whereas an American citizen, for example, can register on the Prosper platform with only personal information and an email address, he can also obtain a loan of up to $ 40,000 for a period of three years with the availability of certain conditions, most notably the social security number and the approval of an investor to finance it.

The graph below depicts the volume of credit provided by P2P lending platforms in the United States of America from 2011 to 2021. (Unit: million dollars)

Fig.2. The volume of P2P lending in the United States of America (2011-2021)



Source: (Ibis World, 2020)

We note that the market size of P2P lending platforms peaked in 2019, and the business anticipates a value of $870 million in 2021.

Following the 2008 financial crisis, the percentage of Americans who lost trust in traditional banks increased, and, in addition to the widespread use of the Internet and the financial services available through it, many banks and financial institutions reduced the number of their branches in some areas (Scott, 2016). This is referred to as banking deserts, and it harmed certain demographics. People with low means and the elderly, for example, do not utilize the Internet successfully, making access to financial services more difficult than it was previously (Mitchel & Gary, 2021). According to a study conducted by (Scott, 2016) on the cities of Milwaukee and Buffalo. Some residential areas within the two cities suffer from banking deserts because of the reduction of banks from their branches in these areas, and the same is true for rural areas, making it difficult for some groups to access financial services available.

According to a study conducted by (Pankaj & Emer, 2021), these groups and other citizens who do not have bank accounts at all have resorted to P2P platforms for lending. Which was based on data from the Prosper platform for two years (2018-2019), which included the number of loans, the number of borrowers their addresses, interest rates, income levels, and maturities are all listed.

The researchers reached at various conclusions, the most notable of which were:

- Platforms for peer-to-peer lending give extra alternative finance to communities that lack traditional bank branches.
- P2P promotes financial inclusion by allowing residents in banking desert regions to access a variety of financial services.
- Because of the convenience of use, some people prefer P2P platforms for lending even when they have financial services through their banks.

4.2. China

The online financial industry in China has seen tremendous growth in recent years, owing to its diversity and innovations, particularly with the large number of investors in the field of fintech attempting to capitalize on the liberalization and facilities that were available at the start of the last decade (Loubere, 2017).

All banks in China provide digital loans through their electronic channels or P2P lending platforms. Due to the huge amount of loans obtained through these platforms (Loubere, 2017), the P2P lending market in China has been documented as the largest global market in its category.

4.2.1. The development stages of P2P platforms in China

The growth of this business in China has occurred in four stages (Naiwen & Yangjie, 2014):

- **Phase One (2007-2010) Beginning to focus on P2P lending platforms:** About 50 P2P lending platforms were built, with 10 of them being widely used; the average monthly loan volume was over $100 million; and the number of investors in the platforms reached 10,000 people.
- **Phase Two (2010-2013) Rapid Expansion:** The number of platforms expanded from 50 to 523 by the end of 2012, with an average loan volume of $500 million US dollars per month, and the number of participants in the platforms reached 40,000 active investors.

  According to (GHRIS, 2019), the cause for this development is:

  -The rise of electronic payment technologies such as alipay and wechatpay.

- The absence of rules and legislative controls on the side of the Chinese financial authorities, which allowed for greater flexibility, which aided in innovation and development.

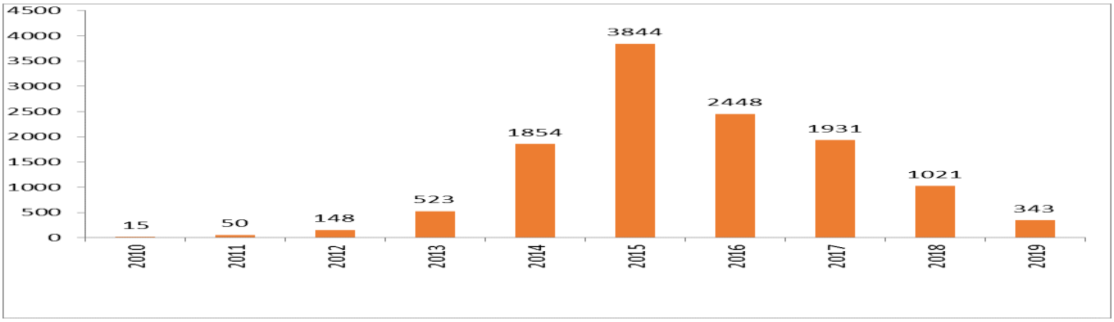
- The concentration of commercial banks on funding state-owned enterprises and the neglect of start-ups and private entrepreneurs led in a credit market gap, which these platforms had to fill.

- Because of China's low interest rates, investors have turned to P2P networks to demand greater rates.

- **Phase Three 2013-2015 The Big Bang and the Emergence of Risks:** The number of platforms increased to 3,844, the amount of online trade surpassed $20 billion, 9 times more than in 2012, and China became one of the world's largest P2P lending marketplaces, with 130,000 investors. 74 platform went bankrupt because of frauds recorded on these platforms during this time.
- **Phase four 2015-2020 Serious Intervention and Attempts to Organize:** To decrease the risks of the P2P lending sector, China's financial authorities initiated regulatory activities, establishing legislation and rules controlling this market. As P2P lending platforms contributed throughout these periods, the number of platforms began to shrink, with the registration of new platforms for significant corporations that entered the market after being reassured about the legal status. The period was effective in funding small businesses and micro-enterprises, with the volume of loans through it accounting for 40% of total bank loans. With the flow of time, the number of platforms and investors decreased a reflection of the restrictive restrictions that were imposed on these platforms in response to repeated frauds, in which thousands of investors were victims, in order to organize them and activate the monitoring process. Between 2017 and 2020, the P2P market for Chinese lending underwent a fundamental shift, with platforms dropping from 3800 to zero and eventually disappearing entirely.

The following figure shows the number of P2P lending platforms that were active in China during 2010-2019.

Fig.3. The number of P2P lending platforms in China during the period (2010-2019)



Source: (statista, 2020)

4.2.2. China's Peer-to-Peer Lending Platforms and Their Relationship with Small and Medium Enterprises

Financing for private firms in China is hard to come by. Despite the enormous number of start-ups and micro-enterprises, their share of bank loans did not reach 1.3 percent in 2017; however, they find it difficult to secure bank loans since they are focused in certain. This was confirmed by a World Bank report from 2013, which stated that only 25% of medium and small enterprises received bank credit, because the Chinese banking system is focused on financing large state-owned enterprises (Babak & Siti, 2021), and these emerging institutions resorted to P2P lending platforms to meet their financing needs. In 2015, half of the borrowers on these platforms were small company owners, with a total borrowing amount of 1891 billion Chinese Yuan (Babak & Siti, 2021).

Despite the massive frauds that investors have been exposed to in China's P2P lending platforms, and followers' descriptions of them as a failed experience, it is worth noting the important role these platforms have played in providing the necessary funding to millions of Chinese for projects that contribute to sustainable development, particularly in rural areas with low banking density.

5. Conclusion:

The world's fintech revolution is freshening by the day, as there is no field related to the financial sector that has not been affected by these massive technological developments, and perhaps P2P lending platforms are just an innovation and application of one of the many application packages provided by Fintech. These platforms, which have begun to compete with established commercial banks Despite its ambiguous legal status at first, they demonstrated a great ability to bridge the financing gap left by the decline of banks in the United States of America following the 2008 crisis in providing credit. However, financial authorities in the United States of America were quick to contain this new industry legally, and put it in check. An atmosphere favorable to activism, as well as creativity, gave alternative finance to Chinese start-ups with ideas and projects that traditional banks had rejected.

These and other financial projects play a significant role in spreading and bringing financial services closer to individuals who do not have access to banks and their branches, rural and remote inhabitants, and low-income people.

: Bibliography List .6

6.1. Journal article :

- Abraham, B. (1972). Fintech: A series of 40 time-shared models used at manufaturers Hanover Trust Company. Interfaces.
- Abushaban, R. (2014, 10 10-13). Crowdfunding as a catapult for innovation in the Middle East: Obstacles and possibilities. IEEE Global Humanitarian Technology Conference. San Jose, CA, USA: IEEE.
- Babak, N., & Siti, N. (2021, 01 11). Peer-to-Peer-Lending Industry in China and Its Implication on Economic Indicators: Testing the Mediating Impact of SMEs Performance. International Journal of Financial Research, pp. 106-114.
- Eiger, Z.-e., & Jeremy, M. (2018). P2P Lending Basics: How it Works, Current Regulations and Considerations. New York, Morrison & Foerster
- Eugenia, O. (2018). Peer-to-Peer Lending Business Model Analysis and the Platform Dilemma. Int J Financ Econ Trade., pp. 31-41.
- Martin, C., & Kai, G. (2020). Peer-to-Peer Lending with Chinese Characteristics: Development, Regulation and Outlook. Londres: Routledge.
- Melissa. (2017, 05). Crowdfunding as a Financing Resource for Small Businesses. Doctoral Study College of Management and Technology. Walden University.
- Miline, A., & parboteeah, p. (2016). The Business Models and Economics of peer-to-peer lending. Brussels, Belgium: European Credit Research Institute.
- Mitchel, l. L., & Gary, H. (2021). Understanding spatial variations in accessibility to banks using variable floating catchment area techniques. Applied Spatial Analysis and Policy, pp. 449-472.

- Mohamed, H., & Ali, H. (2018). Blockchain, Fintech, and Islamic Finance. Berlin: the Deutsche Nationalbibliothek.
- Pankaj, K. m., & Emer, K. (2021, January 18). The role of P2P platforms in enhancing financial inclusion in the United States: An analysis of peer -to- peer lending across the rural-urban divide. Finanial Management, pp. 1-28.
- Scott, H. (2016). Commercial bank locations and "banking deserts": a statistical analysis of Milwaukee and Buffalo. Annals, pp. 253-271.
- Usha. (2014). Crowd Funding For Startups in India. IOSR Journal of Business and Management, pp. 50-54.
- Loubere, N. (2017, décembre). L'eesor de la finance sur internet en chine et les tyrannies de l'inclusion. Perspectives chinoises pp. 11-21.
- سعيدة حرفوش. (2019). التكنولوجيا المالية صناعة واعدة في الوطن العربي. مجلة آفاق علمية، الصفحات 724-744.
- علي صاري. (2021). الإقراض بين النظراء والتمويل الجماعي آليات دعم المؤسسات الناشئة في الدول النامية. مجلة الاقتصاد والتنمية، الصفحات 92-106.
- لزهاري زواويد. (02 يناير, 2021). دور التكنولوجيا المالية في تعزيز الشمول المالي في ظل جائحة كورونا. ريحان للنشر العلمي، الصفحات 1-23.
- مارمور. (2019). فينتك، الابتكارات المالية التقنية. الكويت: مؤسسة الكويت للتقدم العلمي.

6.2. Internet websites:

- GHRIS, H. (2019, 04). The rise and fall of p2p lending-in china. Retrieved 09 17, 2021, from Fin extra https://www.finextra.com/blogposting/17107/the-rise-and-fall-of-p2p-lending-in-china
- Ibis World. (2020, 12 17). Peer-to-Peer Lending Platforms in the US - Market Size 2005–2026. Retrieved 03 10, 12, from Ibis World: https://www.ibisworld.com/industry-statistics/market-size/peer-to-lending-platforms-united-states/
- Naiwen, Z., & Yangjie, S. (2014, 09 12). The Evolution of Peer to Peer Lending in China. Retrieved 09 17, 2021, from crowdfundinside: https://www.crowdfundinsider.com/2014/09/48954-evolution-p2p-lending-china/?fbclid=IwAR3ZVMYSyZ_cFFIx84cVvaDZkPPOBU4nIdw94MH0NXChLLZIqVveejWqWhA
- Statista. (2020). the number of P2P lending platforms in China during the period (2010-2019). Retrieved from statista: https://www.statista.com/statistics/652720/china-online-p2p-lending-platform-count/