LENDING BANKING AND FINANCIAL TECHNOLOGY PEER-TO-PEER LENDING BETWEEN DISRUPT OR CREATIVITY

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DOI: https://doi.org/10.37178/ca-c.23.1.245

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Abstract

This study provides a conceptual model related to solving problems that have arisen since the emergence of financial technology (fintech) Peer-to-Peer Lending (P2PL) in Indonesia, where P2PL currently has disrupted bank lending. Meanwhile, the policies implemented by the Indonesian government have implemented Restrictions on Emergency Community Activities (PPKM) to deal with the COVID-19 pandemic, which has economic consequences. PPKM itself generally limits community mobility, reduces commodity distribution, and has implications for economic activities. Moreover, the still depressed macroeconomic conditions will put pressure on the financial sector's performance, including the banking sector. In addition, changes in social activities in a society where people are currently limited in all their activities have encouraged digital economic activities, and that is also why lending banks are rushing to enter the era of digital transformation. Our qualitative results confirm that lending banks can strike back at p2pl because they have competitive challenges.

Keywords: ppkm, p2pl, digital transformation

Introduction

Currently, we are in the digital era, wherein this era everything is so fast compared to previous eras, anything is so fast that work that is usually done in a matter of years can be quickly done in a matter of hours, for example with the presence of IoT and also financial digital innovation. As introduced by Tapscott [1], according to him, the digital economy is an activity of social phenomena that can affect the more comprehensive economic system. Where this phenomenon has access to information capacity, information instruments, and information processing. Meanwhile, the digital economy component that was first implemented and identified was the information technology industry based on e-commerce activities and digital distribution of goods and services transactions.

Meanwhile, Indonesia is the fourth largest country by population globally after China, America, India. Furthermore, the latest developments in Indonesia's domestic economy are still influenced by developments in handling the current pandemic. In Indonesia itself, the government has now issued a policy on implementing Emergency Community Activity Restrictions (PPKM). PPKM itself generally limits people's mobility, reduces the distribution of commodities, and has implications for economic activities. Moreover, the still depressed macroeconomic conditions will pressure the financial sector's performance, including the banking sector.

The development of banking in Indonesia is increasingly colored with technology-based transactions, decreasing the number of branch offices. On the other hand, banking performance is also influenced by low interest rates and ample liquidity. The development of fintech, especially Peer-to-Peer Lending (P2PL), has an increasing trend. In Indonesia itself, 116 P2PL are registered, and 77 P2PL are registered and licensed based on OJK data on August 31, 2021.

On the other hand, banks' lending also face competitive challenges, the emergence of fintech P2PL, which have the advantage of being a disruptor, because fintech P2PL has more competitive advantages compared to incumbent financial service actors because they have much innovation in the financial industry. Customers still really need banking. However, on the other hand, customers also have more expectations for the banking industry.

Literature Review

Fintech P2PL

Recently, rapidly developing technology in finance has been considered as an essential transaction tool. However, technology in finance can undermine the exclusivity of traditional finance and reduce asymmetry in the placement of capital in the form of money and valuable assets, as well as the exclusion rate of loans in traditional markets[2]. Starting in 1982, e-trade has taken fintech more advanced by allowing an electronic banking system for potential investors. In 1990, the entire financial market sector industry was greatly influenced by social and cultural changes that took place rapidly and involved the basics or principles of the internet, as evidenced by the emergence of several online stocks, making it easier for potential investors to invest. Next up is a significant reduction in financial transaction costs. With this internet revolution, the face of the financial industry sector has changed significantly, and everything is done through electronic media, including the internet. The P2PL industry in Indonesia has experienced significant growth from year to year. Furthermore, growth in this sector has been felt positively by both the community and the government. As for the first P2PL regulation, which was only released at the end of 2016, this sector is still in its early stages [3]

Financial technology innovation has changed the social and business environment and has inspired a crowdfunding business based on information technology, where the public is pampered with ease and speed of access. P2PL is a business model that refers to loans without collateral between lenders and borrowers through an online-based technology platform. This technology makes extensive use of cloud computing, big data, and social networking technologies, and P2PL also uses information sharing and search to facilitate borrower screening. So that by utilizing this kind of platform, will eliminate the high overhead costs of conventional banks and will significantly reduce the time and, of course, transaction costs. Furthermore thus, the advantages of P2PL are that it can offer a much higher return on investment to lenders and borrowers, of course providing lower fees than conventional banking. In addition, with the rapid emergence of the fintech industry in Indonesia, large companies' acquisitions have blurred business competition in the industry blurred. The fintech industry has the potential to grow bigger in Indonesia. This is because the millennial generation or the young population tends to use technology in every activity.

After adopting advances in e-commerce-based technology and big data-based technology, the P2PL technology platform provides excellent opportunities for businesspeople. At the same Stime, they are expected to be wary of borrowers who risk default on user loans, which will later impact the health of the P2PL business platform [4, 5]. Social lending such as P2PL is a solution on a digital platform, where lenders and borrowers can do business without the involvement of financial institutions. Recently P2PL has gained significant momentum, where the platform has reached a circulation of billions of dollars' worth of loans. Nevertheless, unfortunately, this P2PL platform cannot be separated from all forms of risk. Among them are P2PL must return a higher investment for investors, but the risk comes from loans and interest that the borrower does not repay[6].

In any industry, financial institutions have a vital role because they are not only used in our daily lives and are vital for economies around the world. Hence, the impact is enormous on the world economy [7, 8]. Although the financial sector has faced many transformations over the years, it has successfully adopted and survived the changing times. Furthermore, even now, financial institutions have changed a lot since the advent of fintech. The result of changes in financial institutions, in this case, fintech, is something that has not been explored much and will undoubtedly become a fundamental challenge for regulators, industry players, academic economists, and the general public in the financial industry[9]. Currently, Indonesia's financial system has been running very well over the past decade after being hit by the systemic banking crisis. In addition, at this time, there are also many government financial policies that have been set to encourage the financial system, which will later be able to help economic growth, maintain financial stability, and can also support financial inclusion in Indonesia [10]. With platforms such as P2PL, it is possible for people who have excess funds to lend funds to people who need funds through online loan platforms. Furthermore, for those who need funds, they can also choose the most suitable funding provider platform according to them. In addition, those who need funds can communicate directly with the person they will borrow while obtaining funds at a lower cost. On the other hand, those who want to provide loans or lenders can get a higher return than that obtained by depositing in a bank. These lenders can choose whom they lend to, or they can determine what interest rate they want based on the type of risk they take [11, 12].

P2PL is also sometimes referred to as the online loan market, where the model of lending and borrowing money between individuals and businesses through online services that directly bring together lenders and borrowers without intermediary commercial banks [13]. The main difference between banks and non-banks lies in the uniqueness of banks as collectors of public deposits and their specialization in monitoring, screening, and banking relations [14]. The emergence of fintech has caused the fragility of financial institutions, such as conventional-sharia banking and rural banks [15].

The development of financial technology can facilitate the process of digitization and capitalization by increasing transparency and efficiency, while bargaining power affects the production process [16]. With the rapid development of information technology (IT), especially in the financial industry, fintech has become a growing area for companies and organizations. Due to the widespread adoption of IT, the financial industry also uses various technology applications based on the fintech platform, which can help process information and offer financial services. While the textual password is the most widely used authentication mechanism today, it has many limitations. Thus, fintech requires increased security in the form of authentication to prevent crime in cyberspace[17].

Bank Lending

In the first half of 2020, many countries experienced a prolonged period of restrictions on direct interaction activities, forcing people to use e-commerce for shopping and selling, social media, and a tool for co-workers, etc. Many people say that the digital transformation of an organization's business and society does not come from digital experts, CTOs, or CEOs, but from COVID 19 itself. This phenomenon greatly affects the banking sector, as customers are strongly encouraged to use all digital banking options and easy access to financial services. Digital transformation, including choosing a business model as a Digital Bank, aims to expand access to banking services without limits to customers and as part of efforts to encourage the digital economy, especially micro, small, and medium enterprises, to continue to grow, which in turn will encourage national economic growth.

Many industries around the world are currently hard-hit by the COVID-19 lockdown. Early theoretical and practical observations across many industries suggest that business model innovation (BMI) may be the solution to recovering from and successfully tackling the COVID-19 crisis [18]. Sustainable development is needed in the banking industry because banking has a unique intermediary role and mobilizes financial resources towards agile goals. Several external shocks have greatly affected the pillars of the banking industry's business model, as is known in the 2008 financial crisis and the COVID-19 pandemic that has hit the world today. Furthermore, this shock also accelerates digital transformation, especially in the lending banking sector, and is sustainable[19].

Due to banks transforming to digital, therefore many customers are being moved from their branches and to digital channels nowadays. The reasons for this are clear: to move process-driven interactions to digital channels and also to save costs while protecting the personal relationship of bank employees with bank customers. Although today many people welcome banks' transition to digital, in particular customer segments, they still prefer to visit their banking branches for transactions. With many bank branches closed during this pandemic, inevitably, many consumers have no practical choice but to use their bank's digital channels. The result is that 50 percent of banking consumers now interact with their bank via a mobile application at least once a week [9].

Fintech P2PL vs Bank Lending

The emergence of fintech, which causes the fragility of financial institutions, is a controversial issue that we have often heard about for a long time. The innovation of fintech products does not impact the fragility of financial institutions when we ignore market characteristics. However, if we examine the profitability channel, fintech affects the fragility of financial institutions[15].

Besides, difficulties among small banks also harmed the bank portfolio management business, thereby reducing the number of their investors. The results illustrate the potential risk to financial stability to the extent that the interconnection between funds and banks can trigger the transmission of shocks to the market [20]. According to cognitive appraisal theory, personal consumer confidence mediates the relationship between national consumer trust and perceived financial vulnerability, leading to increased price-conscious behavior [21]. To improve our understanding of how people make financial decisions, it is essential to investigate what psychological characteristics influence an individual's positive financial behavior and financial well-being. People with good self-control are more likely to save from each paycheck, have better general financial behavior, feel less worried about financial problems, and feel safer in their current and future financial situations[22].

Meanwhile, in the Czech, social lending is known as P2PL, where the platform provides new financial transactions that go through traditional intermediaries by directly linking borrowers and lenders. However, there is an information asymmetry between lenders and borrowers that online P2P lending platforms have to deal with an information asymmetry between lenders and borrowers. Since many loans are not secured by collateral, assessing the creditworthiness of the borrower is very important. Meanwhile, lenders should consider a well-known fundamental relationship - higher profitability, higher liquidity, and higher volume of assets mean a lower risk of default. In contrast, higher debt and leverage mean higher risk default[23]. Many P2PL Investors invest more in loans, namely from borrowers they know personally. The more initial investment by investors who know subsequent borrowers is associated with a higher probability of obtaining a second loan from a P2P lender, more significant investment by other P2P investors, and lower ex-post defaults. These results are consistent with informal lenders having superior information or monitoring skills and rational shepherding after informal investors' investment decisions. On the other hand, financial institutions involve a growing number of individuals, primarily poor people, who have access to formal financial services, mainly through formal bank accounts [24].

[1] has made a comparison figure of the mechanism between the two systems, as we can see below:

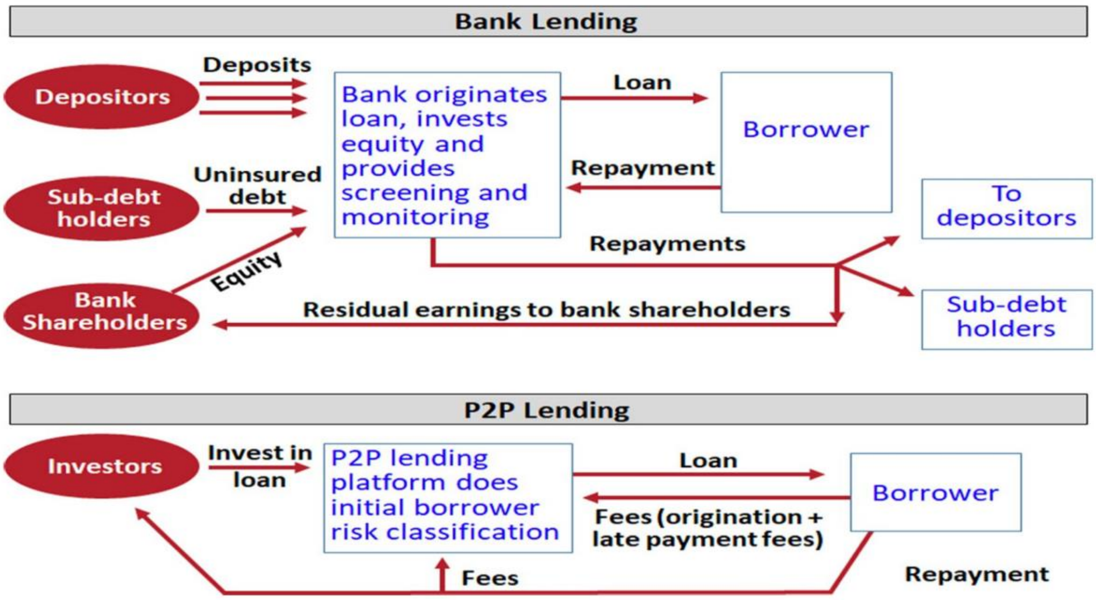

Fig. 1. P2PL versus bank lending [1]

From figure 1 above, we can see that the P2PL mechanism is simpler than bank lending, whereas if compared to other shadow banks, fintech lenders serve more creditworthy borrowers and are more active in the refinancing market and appear to provide borrowers with greater convenience rather than cost savings [25](Buchak et al., 2018).

Table 1

Distribution of loan based on OJK's data

Financial institution	2018 July In Billion Rp	2019 July In Billion Rp	2020 July In Billion Rp	2021 July In Billion Rp	Compound Annual Growth Rate
Commercial Conventional Bank – Group of Business Activities 2	519393.7404	564196.8871	560524.9199	526313.3528	0.44%
Commercial Conventional Bank – Group of Business Activities 2	1730257.63	1747020.575	1630695.887	1479864.837	-5.08
Commercial Conventional Bank – Group of Business Activities 2	2542113.513	2962066.593	3153765.278	3364325.037	9.79%

Commercial Sharia Bank – Group of Business Activities 2	118575.0141	131351.0436	108045.8339	82533.92334	-11.38%
Commercial Sharia Bank – Group of Business Activities 3	62760.40786	71222.31214	115850.4696	170343.0987	39.49%
Rural Bank	125013.8697	136585.2823	141919.9843	153318,1719	7.04%
Fintech P2P Lending	9213.822179	49794,01886	116970,9331	237488.2142	195.39%

From table 1 above, it can be seen that the growth of the distribution of loans Fintech P2PL is very rapid, where the authors calculate using the following formula:

$$Compound\ Annual\ Growth\ Rate = \left\{\left(\frac{total\ distribution\ of\ loan\ in\ july\ 2021}{total\ distribution\ of\ loan\ in\ july\ 2018}\right)^{1/y} - 1\right\} \times 100$$

Where in the above measurements, commercial conventional banks – group of business activities (hereinafter abbreviated as CCB-BA) 2 found growth over the last four years was 0.44%. In CCB-BA 3, the growth has decreased for the last four years, which is -5.08%. The CCB-BA4 experienced a significant increase of 9.79%. In contrast, commercial sharia banks – group of business activities (hereinafter abbreviated as CSB-BA) 2, experienced a significant decline of -11.38%. On the other hand, CSB-BA 3 experienced a significant increase in the amount of 39.49%. Rural banking has also increased since 2018, which is 7.04%. What is very surprising is that the p2pl fintech has experienced an extraordinary increase of 195.39% from 2018. And all of that growth can be seen in the following figure 2 below:

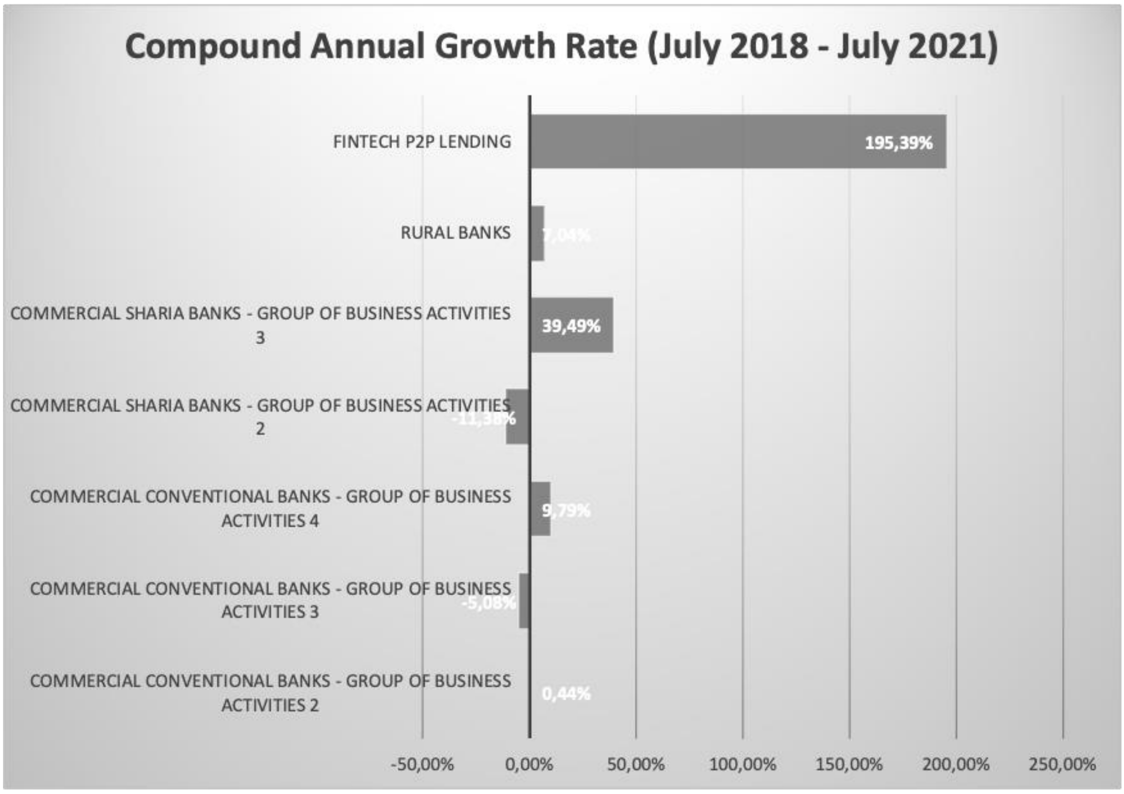

Fig. 2. Distribution of loans based on compound annual growth rate

If viewed from the data processing above, it can be seen that the increase in bank lending also faces the challenge of the competition with P2PL fintech companies, which have the advantage of being a nuisance. From the empirical findings and the literature works above, the authors conclude that the aim of this research study is to examine how bank lending has managed its business since the emergence of p2pl fintech, to examine the determinants of the success of p2pl fintech and bank lending, and how to act in modeling bank lending. Compete with fintech p2pl. So that the purpose or contribution of this research will be divided into three, namely, first to the business world, especially business finance as a reference in carrying out business transformation in the current digitalization period, second is to contribute to regulators as a reference in making regulations, and third, namely for academics to be used as a reference and as literature and concern for further research.

Methods

After conducting a literature review, the authors analyzed secondary data obtained from published data from the OJK. Furthermore, the authors carried out a qualitative approach. In this study, the author uses inductive approach and the research philosophy of Interpretivism, where Interpretivism is to understand humans as social actors who interpret the social roles of others in our own set of meanings[26]. In addition, the authors want to build a model by interpreting the constructs or respondents' ideas based on the respondents' explanations, and scenario planning is also used to explore the subject of this research.

Moreover, this research aims to examine how bank lending is to manage its business since the emergence of fintech p2pl, to examine the determinant success factors of fintech p2pl and bank lending, how is action modeling for bank lending in competition with fintech p2pl and anticipate what lending banks should do if they go digital. Qualitative methodology using semi-structured in-depth interviews and focus discussion group (FGD) is the best way to explore all of them and to collecting the data. This research uses a literature review approach that describes a theory or findings taken from various sources used as references in solving problems. The sources used by the authors will be based on literature studies, namely books, articles, papers, documents, regulations, and other written sources related to this writing. This qualitative research was carried out because it does not aim to test or prove the theory about the emergence of fintech p2pl and digital banking innovation. So, this research also aims to describe the model or pattern.

Table 3

List of Respondents

No.	Position Level	Org.	Data Coll. Type	Meeting Type
1	COO (Director)	Conventional Bank	Semi-Sructure In-Depth Interview	Online
2	Vice President (Director)	Conventional Bank	Semi-Sructure In-Depth Interview	Online
3	Manager	Conventional Bank	Semi-Sructure In-Depth Interview	Online
4	Director	Sharia Bank	Semi-Sructure In-Depth Interview	Online
5	Manager	Sharia Bank	Semi-Sructure In-Depth Interview	Online
6	Director	Fintech P2PL	Semi-Sructure In-Depth Interview	Online
7	Director	Fintech P2PL	Semi-Sructure In-Depth Interview	Online
8	Director	Fintech P2PL	Semi-Sructure In-Depth Interview	Online
9	Manager	Fintech P2PL	Semi-Sructure In-Depth Interview	Online

10	General Manager (Director)	Rural Bank	Semi-Sructure In-Depth Interview	Face to Face
11	Director Level	Vendor	Focus Discussion Group	Online

The respondents are nine experts in the financial industry, with an average experience of more than 15 years. The position of respondents varied from the manager, vice president, and director level. Table 1 above describes the list of respondents in this study. In addition to qualitative data from the results of the FGD, this research is also equipped with triangulation with secondary data from statistical data on publications, documents, and news on the internet. So that this triangulation can increase the credibility and validity of this research [27].

Results and Discussions

If we look at Figure 1 above about p2pl versus bank loans described by [1] the flow from bank loans is much longer than the flow from p2pl. Here is an overview of the common flows found in p2pl:

Fig. 3. The P2PL Process

From figure 8 above about the P2PL process and the agreements in P2PL, the processes of P2PL are much simpler than the processes and agreements of banking lending, this indicates that digitalization has made it easier and simpler to flow business from financial inclusion.

Meanwhile, to answer the research objective to examine how bank lending is managing its business since the emergence of fintech p2pl, and to examine the determinant success factors of fintech p2pl and bank lending. The authors use a combination of a literature review approach and a qualitative approach to several decision-makers from banking, rural banks, digital banks, and p2pl, and the results are shown in figures 9 and 10 below:

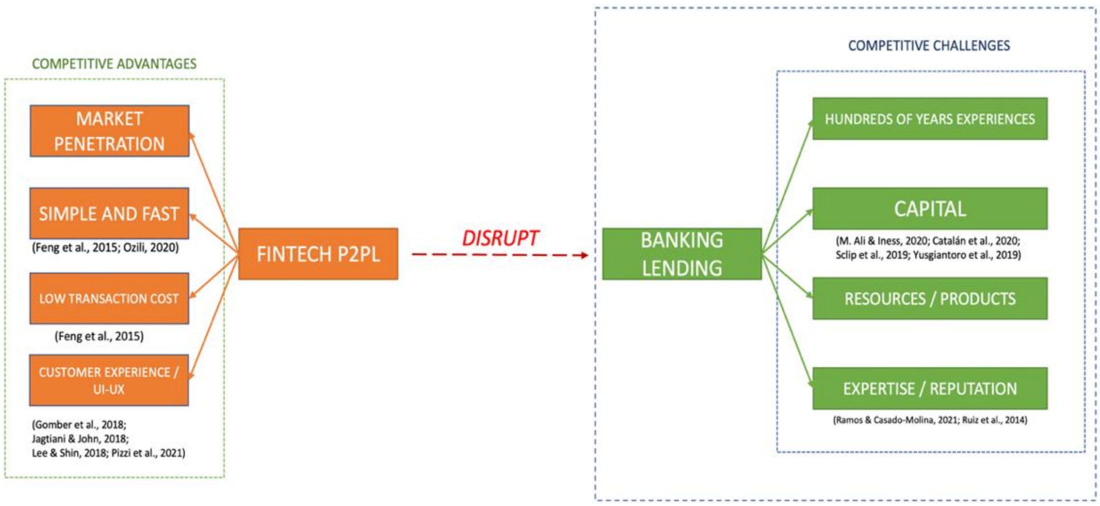

Fig. 4. Fintech P2PL VS Bank Lending (Before Digital Transformation)

From figures 9 above, we can see that P2PL has competitive advantages where they have: market penetration; Simple and fast[28] Low transaction cost [16]; Customer experience / UI-UX [20, 24, 29-31]

Meanwhile, in terms of banking lending, they have competitive challenges, namely responding to the emergence of P2PL, where they had before they transformed into digital, as figure 10: Hundreds of years experiences; Capital [6, 13, 19, 22, 28, 32-34]; Resources / Products; Expertise / Reputation [9, 11, 23, 35, 36].

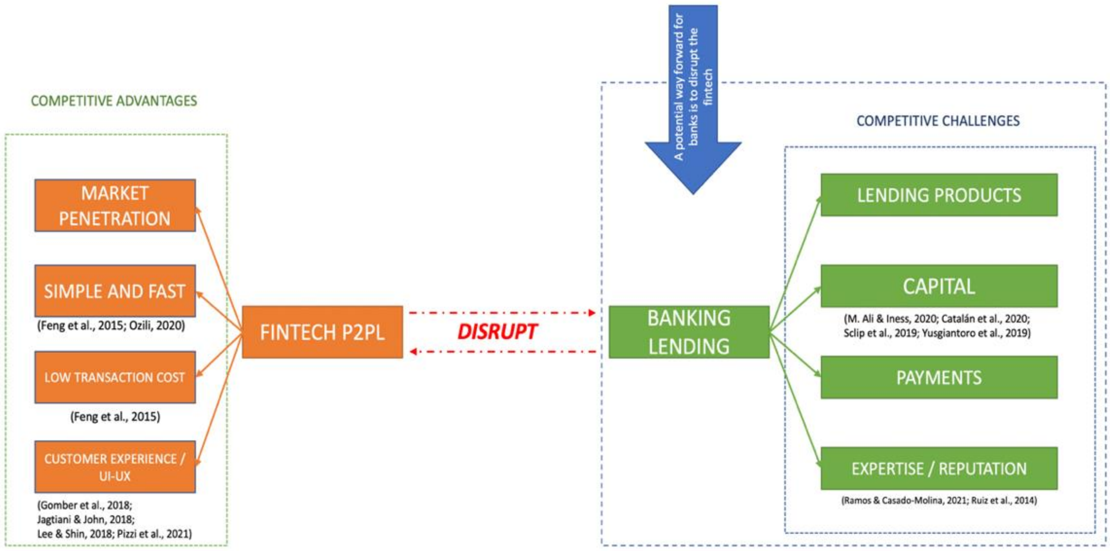

Fig. 5. Fintech P2PL VS Bank Lending (Digital Transformation)

However, if we look at banking modelling after transforming into digital, banks can disrupt P2PL behind because the bank already has capital, and if all services in banking are converting to digital. In addition, lending banks have the resources, significant capital, and expertise to deal with disruptors. Lending banks have the opportunity to launch their digital attackers in consumer banking, wealth management, payments, and various specialist services. Like figure 11 below to answer the research objective regarding action modeling for bank lending in competition with fintech p2pl:

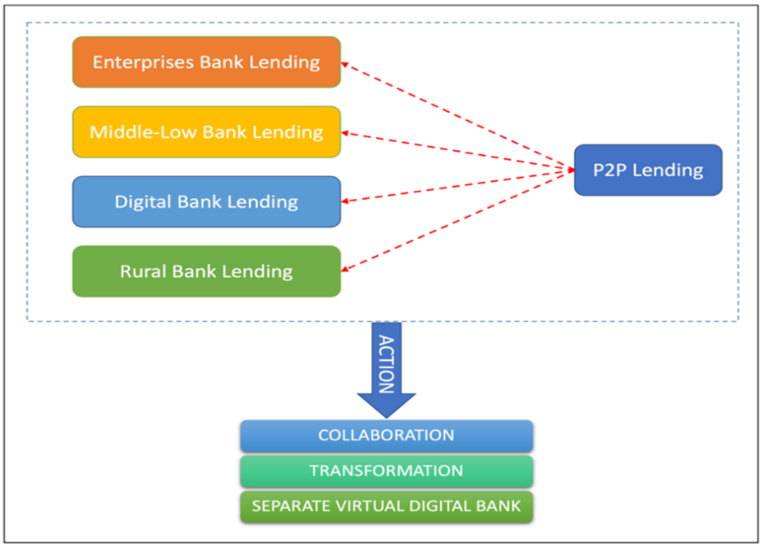

Fig. 6. Action Modelling for Bank Lending and P2PL

In this case, an action modeling for bank lending and p2pl that we processed from qualitative interviews and the actions that banks need to take must be based on each business's facts. Like enterprise banking lending, the treatment differs from middle-low banking lending and conventional banking lending, and rural bank lending. For that, they have to sort out whether to transform, collaborate or become a separate virtual digital bank. Depending on what kind of momentum is following their respective business strategies and whether the regulator will approve it, it needs further study. So that things do not go as expected. Banks' massive spending on innovation has not stopped P2PL from disrupting and growing their customer base. Banks realized they did not have what it took to succeed. At the same time, P2PLs realized that even if they were better skilled, more agile, and becoming increasingly better funded, breaking the dominance of incumbent banks would be complicated.

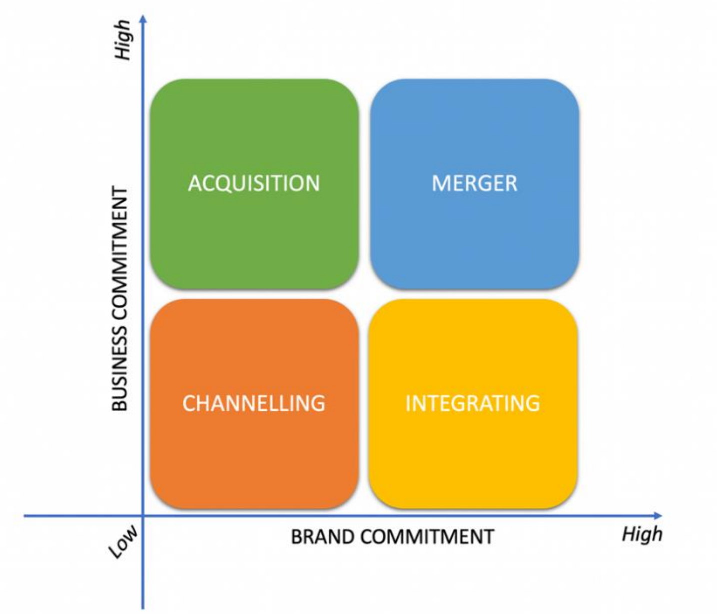

Fig. 7. A Collaboration Model for Bank Lending and Fintech P2PL

From Figure 12 above, the authors classify the collaboration model based on business commitment and brand commitment. And in the following formations:

Channeling

This is where bank lending can help P2PL to sell their product services to the market. Where this concept has benefits for P2PL from accessing new customers and getting new sales, enhancing their brand through the relationship with or ideally a respected lending bank, and market insight to improve their products, another advantage is those existing customers or customers who have been inactive for a long time get new product offers from banks they know today, which they may find interesting with the new product. Another advantage is getting a guarantee from the bank that their current P2PL can be trusted. In addition, lending banks also gain good insight into how customers like products for a reason, or lending banks can also decide what to do next in their business development, whether they have to leave this collaboration or later build in-house development or even by deepening business relationships with P2PL.

In this collaboration concept, when viewed from the risk factors for P2PL and customers, there are almost none because they are not directly affected by the complexity of bank lending operations and are also affected by banking exclusivity. So ideally, lending banks can also learn from P2PL's way of running their operations, but if it is not managed prudently, it will potentially develop competitors' businesses such as business intelligent rewards. Furthermore, lending banks must also be careful if P2PL harms customers.

Integrating

In a collaboration scenario like this, it is to integrate P2PL capabilities into bank loan offerings. From the customer side, the offer looks like a lending bank providing loan services, although there may be some statement of P2PL contribution in the terms and conditions of the offer. From a bank lending perspective, this is the best way to explore new things that customers will be interested in. If this collaboration concept is successful, it will increase customer satisfaction and provide insight into the next steps. In terms of investment, lending banks make minority investments in P2PL. In terms of P2PL, a collaboration model like this P2PL can collaborate with many banks because usually, in this collaboration model, banks do not provide exclusivity in collaborating.

Acquisition

This is the development of the collaboration concept for the integration model, where the lending bank decides to acquire P2PL, and then they leave it to be independent. In this case, P2PL receive a capital injection, implicit validation of their business model through bank investments, and possible access to bank customers. Ties from the banking lending side should see this collaboration as a means to experiment in several business areas without affecting the operations of existing banks. With this approach, lending banks will get good market intelligence.

Merger

This is a more traditional collaboration model, where collaboration and transactions clearly understand that P2PL will be integrated and rebranded within the bank. Collaboration like this can benefit the lending bank, providing innovation under its brand to increase goodwill and customer engagement. Collaboration in this model risks being associated with very different work and operational cultures.

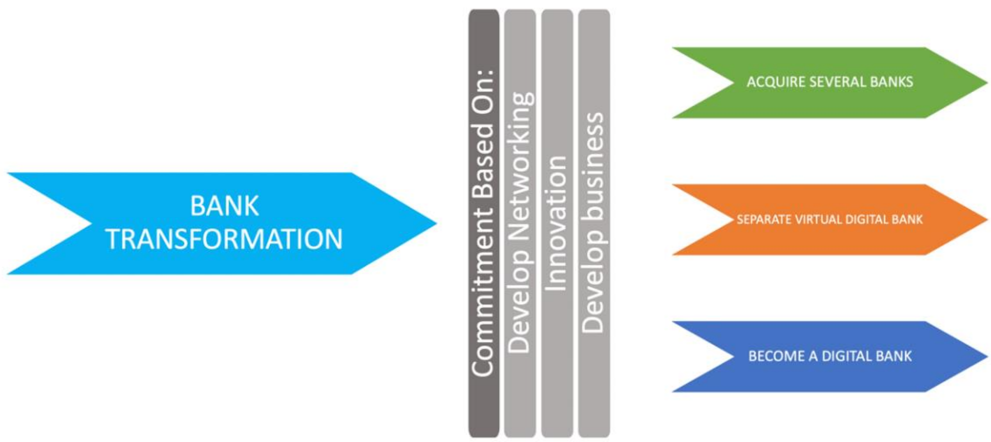

Fig. 8. A bank transformation model

Banks should acquire several banks to be converted into digital banks. Banking can potentially encounter obstacles in understanding the risks arising from digital transformation. The approach is sometimes still "force-fit traditional practices into the transformation framework" this means failing to understand the risks or counterproductive to the added value of digital transformation.

Suggestions from the authors for p2pl and banking lending: both must maintain business and grow faster, which needs to explore various sources of business growth; new businesses can offer “lighter weight, package solutions” through automated processes with cloud solutions at competitive costs; healthy competition, lessons learned from the success of fintech need to be learned by banks in terms of platform utilization and the level of satisfaction of fintech users. Undeniably, many fintech performed well during the crisis. On the other hand, P2PL must learn a lot from banking experience and prudence; access to a new funding source, such as capital, operational, and regulatory costs, and low ROE need to be balanced with the alternative lower cost of funds through technology adoption and targeting new customers, such as MSMEs, which are relatively under-served; increase in the number of loan products and product payments; Digital technology opens up opportunities in loans and payments, which provides much room for transformative change, which demands to be more in line with customer requests (personalization), providing added value based on advanced analytics.

Meanwhile, as a result of this transformation and digitization, other risks will arise, as shown below:

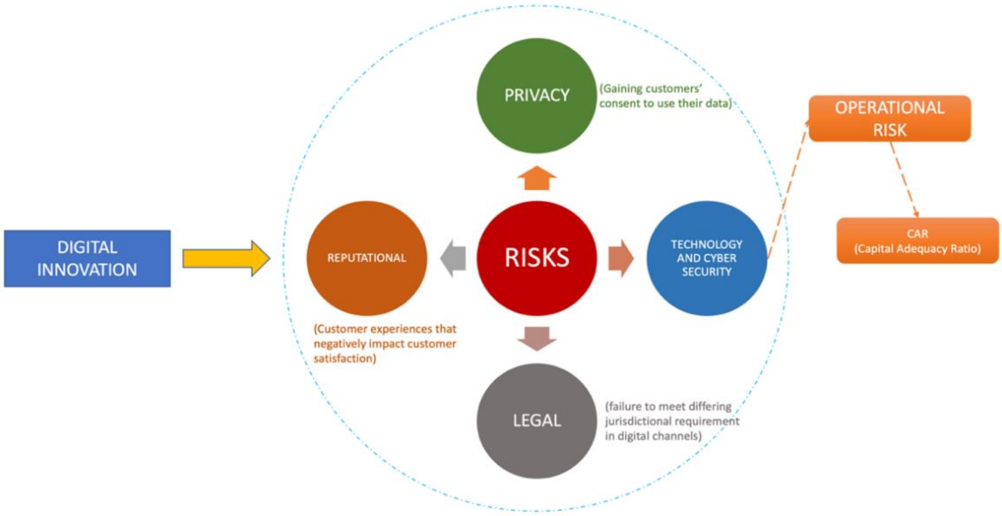

Fig. 9. Risks that can arise from digital transformation (both bank lending and from P2PL)

From Figure 14 above, digital innovation or digital transformation can pose many risks, including: Reputational Risks: related to customer experience so that it can cause customer dissatisfaction; Legal Risks: failure to meet the differing jurisdictional requirements in digital channels; Privacy Risks: gaining customers' consent to use their data; Technology and Cyber Security: it is clear that the more sophisticated a technology is, it is directly proportional to Operational Risk and has an impact on the Capital Adequacy Ratio (CAR).

Conclusion

Banks should acquire several banks to be converted into digital banks. Banking can potentially encounter obstacles in understanding the risks arising from digital transformation. The approach is sometimes still "force-fit traditional practices into the transformation framework" this means failing to understand the risks or counterproductive to the added value of digital transformation.

Suggestions from the authors for P2PL and Banking Lending: Both must maintain business and grow faster, which needs to explore various sources of business growth. New businesses can offer "lighter weight, package solutions" through automated processes with cloud solutions at competitive costs. Healthy competition, lessons learned from the success of fintech need to be learned by banks in terms of platform utilization and the level of satisfaction of fintech users. Undeniably, many fintech performed well during the crisis. On the other hand, P2PL must learn a lot from banking experience and prudence. Access to a new funding source, such as capital, operational, and regulatory costs, and low ROE need to be balanced with the alternative lower cost of funds through technology adoption and targeting new customers, such as MSMEs, which are relatively under-served. Increase in the number of loan products and product payments and digital technology opens opportunities in loans and payments, which provides much room for transformative change, which demands to be more in line with customer requests (personalization), providing added value based on advanced analytics.

However, this research does not have to stop here due to time constraints, and this research only uses literature review and qualitative methods. On the other hand, if banking lending and P2PL all go digital, it needs to be examined quantitatively related to cyber security, the impact on all financial inclusion. So, the contribution of this research will be divided into three, namely, first to the business industries, especially business finance is to serve as a reference in carrying out their business transformation from traditional to digital, second is the contribution to regulators is to be a reference in making regulations, and third, namely to academic is to serve as literature and reference for future research.

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