

# Structure and Conduct Analysis of P2P Lending in Indonesia

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**Abstract:-** The development of technology makes human life activities easier. There are many new breakthroughs in the field of technology to support human life, such as in the financial industri which is currently widely used by the public. One of the financial industries that is currently popularly used by the public is Peer-to-peer lending Online Loans. The purpose of this study was to determine the structure and behavior of the peer to peer lending industri in Indonesia and the relationship between the structure and behavior of the P2P lending industri in Indonesia. This type of research is quantitative and qualitative. This research uses secondary data, namely data from 2021-2022 obtained from the OJK and primary data for 2023 obtained from the websites of each company. The number of samples is 102 which is determined using saturated sampling technique. Data were analyzed using hypothesis testing, concentration calculations and qualitative descriptive. The results of the study show that the structure of the P2P lending industri in Indonesia is in the form of oligopoly, the behavioral strategies adopted by the P2P lending industri are vertical restraint, vertical integration and product differentiation. The results of the study found that there's no correlation between market share and interest rates, and there's correlation between market share and advertising costs.

**Keywords:-** SCP Theory, Concentration Ratio, HHI, P2P lending, Integration Vertikal, Vertikal Restrain, Product Differentiation.

## I. INTRODUCTION

The phenomenon shows that technological developments cause the number of internet users in Indonesia to continue to increase every year. This data shows that more and more internet users in Indonesia are causing the emergence of technology-based business innovation or often known as Financial Technology.

Financial Technology according to Bank Indonesia is the adoption of information technology in the financial system that produces new business models, products and services that have an impact on monetary and financial system stability (Bank Indonesia, 2017). The adoption of technology into financial services makes it easier for people to carry out their daily activities. For example, in the field of buying and selling there are various kinds of e-commerce available such as Shopee, Tokopedia, Lazada, and many more. Likewise in conducting financial transactions, investing, making loans, and so on.

The role of Financial Technology in Indonesia is to encourage the export ability of MSMEs which is currently still low, encourage equitable distribution of population welfare levels and increase national financial inclusion.

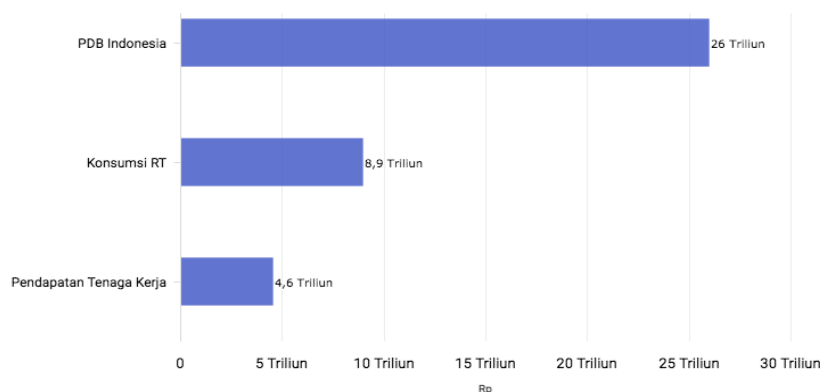


Fig. 1: Fintech's Contribution to the Domestic Economy

Based on a study by the Institute for Development Economy and Finance (INDEF) in 2018 with the Indonesian Fintech Association (AFTECH), the development of Fintech in Indonesia using Input-Output (I-O) analysis was able to increase Gross Domestic Product (GDP) by Rp. 26 T directly and indirectly. The development of Fintech in Indonesia is also able to increase household consumption (RT) up to Rp. 8.94 T. With the presence of Fintech, it is also able to increase labor compensation in the form of salaries and wages by Rp.

4.96 T and is able to absorb 215,433 workers in tertiary and primary sectors such as agriculture.

Based on data from OJK, there are types of services available in Financial Technology, namely Digital Payment System, P2P Lending, Crowdfunding, Market Comparison, and Micro Financing. With the existence of Financial Technology, it certainly greatly facilitates people's lives, transactions are carried out faster and easier and become a

new breakthrough in the field of investment and financing known as peer-to-peer lending.

P2P Lending is a loan service that brings together lenders (creditors / lenders) with loan recipients (debtors / borrowers) through an online platform. P2P Lending is one type of credit loan based online. Peer to peer lending is a new platform for financial transactions that simplifies the function of conventional intermediation by directly bringing together parties who need funds with parties who are excess funds (Yum, Lee & Chae, 2012).

P2P Lending is an investment practice where there is a collection of funds for people who have excess funds (lenders) with people who need funds (borrowers) such as MSMEs and individuals who are carried out online which is supported by the internet network and can be done anywhere

and anytime. This type of Fintech first originated in the UK and then became gradually popular throughout the world including in Indonesia and entered the growth period of P2P lending companies in Indonesia.

According to OJK Regulation No, 77/POJK.01/2016, fintech lending/peer-to-peer lending is a lending and borrowing service in rupiah currency directly between lenders and information technology-based borrowers. As of April 22, 2022, the total number of fintech lending organizers/companies registered and licensed by OJK is 102 companies including 94 Conventional-based Fintech lending companies, 7 sharia-based Fintech lending companies and 1 conventional and sharia-based company.

The growth of Fintech lending in Indonesia can be seen from the development of total Fintech lending in Indonesia.

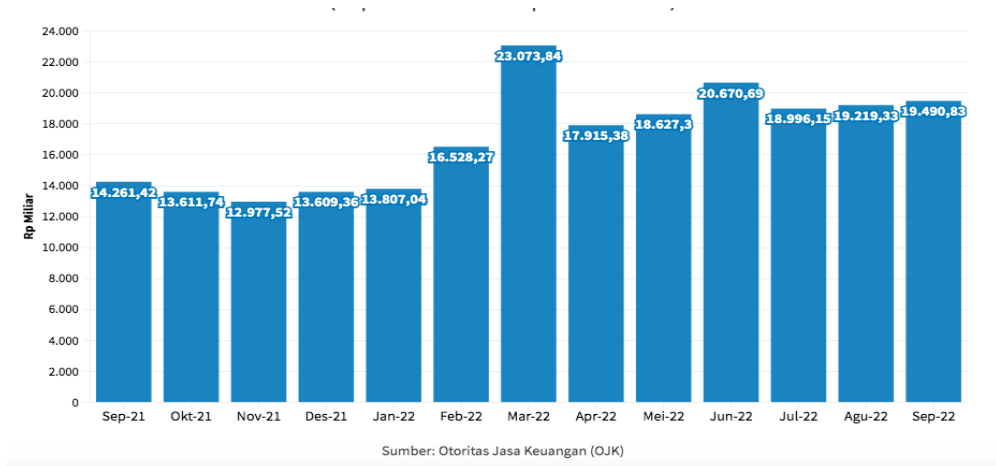


Fig. 2: Total Fintech Lending in Indonesia (September 2021-2022)

Based on data obtained from the Financial Services Authority, the amount of Fintech lending disbursement was IDR 19.49 T in September 2022. This value increased by 1.41% compared to the previous month which was around Rp.

19.22 T. The number of Fintech lending disbursements was also 36.67% higher when compared to a year earlier, namely in September 2021, the number of Fintech lending loans amounted to Rp, 14.26 T.

Table 1: Accumulated Amount of Lender and Borrower Accounts

Jumlah Akumulasi Rekening Lender dan Borrower (satuan akun)		
Tahun	Jumlah Rekening Lender	Jumlah Rekening Borrower
2018	207,507	4,359,448
2019	605,935	18,569,123
2020	716,963	43,561,362
2021	809,494	73,246,852
2022	999,455	99,795,780

Financial Services Authority (2023)

According to a report from the Financial Services Authority (OJK), funding through Financial Technology Peer-to-peer lending has increased in the last 5 years. In 2018 the amount of funding through Fintech lending initially reached Rp. 5.04 T. Then in 2019, 2020 to 2021 the amount continued to increase to Rp. 29.88 T in 2021. And until now in May 2022 the amount of funding has increased rapidly to Rp. 40.17 T. When compared to 2018, this figure has grown by around 697%.

outside Java amounting to 37,920,091. Meanwhile, the majority of lender accounts calculated from 2018-2022 also came from Java, namely 2,631,569, outside Java at 691,281 and abroad at 16,567.

Furthermore, the number of Fintech lending loan recipient accounts calculated from 2018-2022 the majority came from Java, amounting to 201,612,474 people and

Data shows that the majority of lenders, loan recipients, and the largest number of loans from borrowers came from Java Island in 2018-2022. This is proven that Java Island occupies 56% of Indonesia's population with the population of Java Island reaching 154.34 million people in June 2022 and Indonesia's population of 275.36 million people in June 2022.

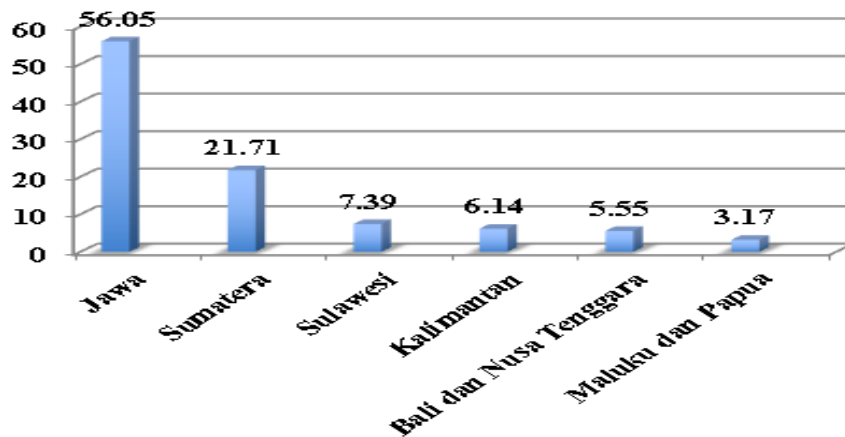


Fig. 3: Population Percentage by Region (June 2022 Data)

Based on the graph in figure 3, it indicates that more than half of the population is concentrated on the island of Java. Hugo (1987) revealed that in the first population census conducted by the Dutch East Indies Colonial Government in 1920, it was recorded that Java Island had a population of 34,984 inhabitants with a total population in Indonesia at that time of 49,155 people. The large number and concentration of population in Java Island is inseparable from the history of infrastructure development of the Java Island region which is far more advanced than other islands in Indonesia such as the construction of the trans-Java road network in 1808.

This research is motivated by the condition of financial technology in Indonesia with the number of fintechs increasing and decreasing. Changes in the number of FinTech can affect the market structure influenced by the increasing market share and the level of fintech competition in Indonesia. In 2020 there were 36 fintech lending licensed by OJK, in 2021 there were 77 fintech lending licensed by OJK, and in 2022, there were 102 fintech lending licensed by OJK in Indonesia.

Changes in the rise and fall of the number of fintech lending can affect the market structure, in this case, the concentration and behavior of fintech lending in Indonesia. The number of fintech lending is large, but the fact is that the market share of fintech lending is only controlled by a few companies that make the fintech lending industry competition in Indonesia far from perfect competition. With this competition will affect behavior, in this case the incentive to carry out advertising activities is very strong, both to increase market demand and seize the market from competitors.

This advertising activity has the potential to become a market obstacle because advertising activities have the potential to create goodwill and consumer loyalty for advertisers. Goodwill and consumer loyalty are one form of market barriers that can limit the number of competitors (new entrants) who want to enter the market to further encourage increased industry concentration.

With the rapid development of the peer-to-peer lending industry, there is research that examines the P2P lending industry. Research conducted by Risna, Nana, and Iwan (2019) examines issues in peer to peer lending such as data

security and legal certainty of online-based loans that have an impact on potential risks for consumers and financial stability and integrity. Yasir and Herma (2022) prove the influence of fintech on Indonesia's economic growth.

Sri (2020) conducted an analysis of borrowers and risk mitigation carried out by P2P lending platforms. Windy and Najib (2020) analyzed the implementation of P2P lending found several problems such as the risk of high interest rates so that many loan recipients default and experience improper collection. Bima and Abdul (2022), Hari (2021), serta Bagiastra dan Bagus (2021) research on legal protection of personal data in fintech.

Previous studies have concentrated on the business model of P2P lending, legal issues regarding P2P lending, characteristics of borrowers and lenders, risk management and the rise of illegal P2P lending cases. Until now, with the rampant practice of illegal P2P lending, dispute resolution experienced by illegal P2P lending consumers has not yet reached a bright spot, this is because OJK has no responsibility for losses suffered by consumers / customers from P2P lending.

In this study, researchers want to examine P2P lending in Indonesia that is registered and licensed at OJK. The reason researchers took the study only P2P lending companies registered with OJK is because with the many online loan companies in Indonesia making cyber crime rampant, with the presence of illegal online loans. Based on a report from OJK, until now there are 4352 illegal online loans found and closed from 2018 to 2022. Therefore, this study only examined online lending platforms that are only supervised by the OJK in order to have clear legality and clear delivery and are in line with the understanding of P2P lending itself.

The purpose of this study is to know and analyze the structure of the peer to peer lending fintech industry in Indonesia, then to analyze the behavior of the peer to peer lending fintech industry in Indonesia, and to determine the correlation between the structure and behavior of Fintech peer to peer lending in Indonesia.

## II. THEORETICAL FOUNDATION

### A. Industrial Economy

According to Arsyad and Kusuma in Industrial Economics (2014), industrial economics is defined as a branch of economics that discusses problems and relationships between aspects of market structure, industrial behavior and performance, and public policies related to industry. Industrial economics discusses the operational aspects of the process of production, distribution, and other special aspects of the company or industry in more depth.

### B. Market Structure

Market structure is a variable that will influence behavior in an industry. This market structure explains the market segmentation that occurs within the industry, the diversification of existing products, the cost structure that occurs in the market and explains the various obstacles that occur to enter a competition. According to Bain, structure will affect the shape of the market within the industry. In general, the state of market structure in the industry can be grouped into 2 parts, namely perfect competition market structure and imperfect competition market structure.

### C. Perfect Competition Market

Perfect competition market is the most ideal market structure because in perfect competition market structure will guarantee the realization of high efficiency of producing goods or services. A market where there are many sellers and buyers and every participant in the market cannot influence the market price.

### D. Structure-Conduct- Performance (SCP) Theory

Structure Conduct Performance theory believes that market structure will affect the performance of an industry. This flow is based on the assumption that market structure will influence the behavior of firms which will ultimately affect the performance of firms and industries in aggregate as expressed by Gilbert (1984)

## III. RESEARCH METHODS

The type of research used in this study is descriptive quantitative analysis. Quantitative methods with descriptive analysis are used to solve problems involving the calculation of numbers. In addition, descriptive methods are used to analyze the structure and behavior of P2P lending in Indonesia. Quantitative methods are used to solve problems involving the calculation of numbers. This method is used to analyze the structure and behavior of p2p lending in Indonesia.

Data obtained from the Financial Services Authority and the company's website are then analyzed to obtain conclusions about the object studied. In this study, the data used were panel data for data from OJK and cross-section data for data from the company's website. The data used is data from 102 p2p lending companies operating from 2017 -2022 that have been licensed by the OJK, with the data obtained for data in 2021 - 2022.

### A. Research Location

The location in this study is a P2P lending financial technology company registered and licensed by the OJK in Indonesia that has been operating and has been licensed from 2017-2022. Indonesia is among the top 2 ASEAN countries in terms of the number of fintech companies second only to Singapore. Therefore, researchers want to examine more deeply about one of the fintech companies, namely fintech lending in Indonesia. The existence of fintech lending / P2P lending in Indonesia is included in the second category of the most fintech usage in Indonesia after financial technology, namely payment systems.

### B. Object of study

The object of research in this study is a P2P lending company operating from 2017-2022 which is supervised and registered by OJK in Indonesia.

### C. Variable Operational Definition

Research variables in this case are market share, concentration, barriers to entry, interest rates, advertising costs and behavioral strategies.

- Market share is information that provides an overview of the total sales of a company to market segments. Market share can be calculated by comparing the total loan disbursement provided by x P2P lending companies to the total loan disbursement of all P2P lending companies supervised by OJK with percent units
- Concentration is a combination of market shares of leading companies or oligopolises where companies are aware of their interdependence. Market concentration can be calculated by CRn and IHL approaches..
- The way to look at barriers to entry is to measure economies of scale seen through the output of market-controlled firms. Then, the output value will be divided by the total output of the industry or referred to as the calculation of MES (Minimum Efficient Scale) which is used as an indicator to measure the ability of new entrants to enter an industry that is approached through company output (Jaya, 2001).
- The interest rate is set at the point at which the savings that represent the new capital offering are equal to the demand. Keynes's view, that the interest rate depends on the amount of money in circulation and liquidity preference (demand for money), is meant by liquidity preference is the demand for money over money by all people in the economy.
- This promotion or advertisement aims to maintain and expand market share, increase brand awareness, and improve the image of the product itself. Behavior in marketing products is strongly influenced by market structure and competitive conditions. The large allocation of marketing/advertising costs indicates a less concentrated market structure and fierce competition.

Behavior can be seen from how the company determines selling prices, product promotion, advertising, coordination in the market and development. In identifying industrial behavior, it will include qualitative data, such as coordination of activities in the market, promotional activities, non-price competition, and behavioral strategies carried out.

**D. Population and Sample**

The population in this study is all P2P lending-based financial technology companies that have been licensed by OJK in Indonesia. The sampling technique in this study is to use saturated sampling techniques.

The sample used in this study is the entire population taken, namely all P2P lending financial technology companies that have been licensed at OJK operating from 2017-2022, namely 102 companies.

**E. Data Analysis Techniques**

Data analysis is carried out descriptively by explaining the picture of the behavioral analysis of the P2P lending industry in Indonesia and quantitative by analyzing the market structure in the P2P lending industry in Indonesia with several methods. The research method used to see the condition of the P2P lending industry in Indonesia is the SCP approach with several tests covering several stages, namely market share test (MS), industry concentration ratio test (CR), Herfindahl Hirschman Index (HHI) test, and MES (Minimum Efficient Scale).

**IV. RESULTS OF ANALYSIS AND DISCUSSION**

The results of the analysis show the 4 largest peer to peer lending companies in Indonesia in 2023. Judging from the market share of the peer to peer lending industry, it is known that the 4 largest companies in this industry, namely Lentera Dana Nusantara, are ranked first. Lentera Dana Nusantara is a technology-based financial services company founded in 2018 with a vision to become a trusted financial technology platform that can bridge the financial gap in society by connecting credible loan recipients and smart lenders.

P2P lending products from PT. Lentera Dana Nusantara is SPinjam where SPinjam provides cash loans offered for E-commerce users, namely Shopee with monthly installment features. Based on the financial statements of PT. Lentera Dana Nusantara in 2022, this company has total assets of Rp. 54,039,763,587 (more than 54 billion rupiah).

The second position is Asetku which has been established since 2017 as an Information technology-based

Lending and Borrowing Service Platform (LPMUBTI) which has obtained licensed status & supervised by the Financial Services Authority. AsetKu is under the auspices of PT. Smart Digital Innovation. Just like other P2P lending companies, asetku is a funding platform that brings together lenders with borrowers. The AsetKu application offers various funding products that can be chosen by lenders with initial funds, tenures, and various returns of up to 24% / year. Asetku cooperates with default insurance and e-commerce partner AsetKu. Based on the financial statements in 2021, Asetku has total assets of IDR 286,569,255,658 (more than IDR 268 billion).

In third place is KrediFazz. Where KrediFazz is an OJK officially licensed fintech company established in 2018 under the auspices of PT. FinAccel Digital Indonesia. KrediFazz has total assets of Rp. 367,377,000 (367 million rupiah more).

In the fourth position is Kredit Pintar which is an application that provides online money loan services under the name of a business entity, namely PT. Kredit Pintar Indonesia which has been established since 2018. Kredit Pintar has total assets of Rp. 364,884,900,110 (more than IDR 364 billion).

**A. Analysis of the structure of peer to peer lending fintech companies in Indonesia**

To determine the structure of the peer to peer lending industry, using the calculation of the concentration ratio (CR), Herfindahl-Hirschman Index (HHI) and Minimum Efficient Scale (MES) from the data that has been collected.

➤ *Variable concentration ratio*

The CR variable or concentration ratio in this study uses the market share variable as the basis for calculation. The concentration variable is used to see the market structure in industries with a certain CR level from peer to peer lending industries/companies. In this study, the CRn levels used were CR4, CR8, CR20, CR30, CR55 and CR88 from 102 peer to peer lending companies that have been licensed and registered by OJK. The concentration index used is the latest year period, namely 2023. The value of this CR variable is obtained by summing the percentage of the market share variable calculated using the Ms. Excel application.

Table 2: Market Share of 102 OJK-Licensed P2P Lending Companies in Indonesia

No	Nama Perusahaan	Market share
1	Lentera Dana Nusantara	17,81%
2	Asetku	10,12%
3	KrediFazz	6,82%
4	Kredit Pintar	6,07%
/	/	/
99	KTA KILAT	0,0015%
100	klikUMKM	0,0014%
101	Kredinesia	0,0003%
102	Pohondana	0,0002%

Data processed (2023)

The calculation of the variable concentration ratio (CR) uses the calculation of the variable market share (market share) from the data of 102 companies, with the basic formula is:

- $CR4 = 17.81\% + 10.12\% + 6.82\% + 6.07\% = 40.75\%$
- $CR8 = 17.81\% + 10.12\% + 6.82\% + 6.07\% + 4.69\% + 4.06\% + 3.84\% + 3.18\% = 56.51\%$

In calculating the concentration ratio, researchers use Microsoft Excel and get the following results:

Table 3: Calculation of P2P Lending Industry Concentration Ratio in Indonesia

CRn	
CR4	40,75%
CR8	56,51%
CR20	80,78%
CR30	89,69%
CR55	97,50%
CR88	99,89%

Data processed (2023)

The table shows the results of the concentration ratio calculation for peer to peer lending fintech companies in Indonesia from the latest year, namely 2023. The CR4 value of the four largest companies, namely Lentera Dana Nusantara, AsetKu, KrediFazz, and Kredit Pintar is 40.75%. The calculation of the concentration ratio of 4 peer-to-peer lending companies in Indonesia in 2023, which is 40.75%, is classified as having a moderate low type IV oligopoly market structure where companies have a market share between 35-50%.

The CR8 value of the eight largest companies in the peer-to-peer lending industry, namely Lentera Dana Nusantara, AsetKu, KrediFazz, Kredit Pintar, Easy Cash, Adakami, BATUMBU, and Rupiah Cepat companies is 56.51%. This proves that these companies are the eight companies with the largest market share in the peer-to-peer lending industry in Indonesia. The calculation of the concentration ratio of 8 peer-to-peer lending companies in Indonesia shows that of the 8 companies classified as type IV market structure, moderate low oligopoly.

The CR20 value of the 20 largest companies in the peer-to-peer lending industry are Lentera Dana Nusantara, Asetku, KrediFazz, Kredit Pintar, EASYCASH, AdaKami, BATUMBU, RUPIAH CEPAT, KoinP2P, Findaya, DanaRupiah, investree, UangMe, Danamas, ModalRakyat, Amarth, Indodana, JULO, Akseleran, and AdaPundi with a CR20 value of 80.78%. This shows that out of 20 firms classified as type IV market structure, moderate low oligopoly.

The CR30 value of the 30 largest companies in 2023 is 89.69%. The CR55 value of the 55 largest companies in 2023 is 97.50% and the CR88 value in 2023 is 99.89% almost 100%.

➤ *Indeks Herfindahl-Hirschman (HHI)*

The calculation of the Herfindahl-Hirschman Index (HHI) using the overall market share that has been squared from the data of 102 companies in 2023 with the basic formula is:

$$HHI_{2023} = 17.77\% + 10.11\% + 6.81\% + 6.06\% + \dots + 0.00\% + 0.00\% + 0.00\% + 0.00\% + 0.00\% = \mathbf{629.945\%}$$

Table 4: IHL Calculation from 102 Peer to Peer Lending Companies

Penyelenggara	MS (%)	MS^2 (%)
1	17,81	317,1961
2	10,12	102,4144
3	6,82	46,5124
4	6,07	36,8449
5	4,7	22,09
99	0	0,00
100	0	0,00
101	0	0,00
102	0	0,00
<b>Total</b>		<b>629,945%</b>

Data processed (2023)

From the results of IHL calculation, it was found that the average IHL value of the peer-to-peer lending industry in Indonesia was 629.945%. In general, according to the Business Competition Supervisory Commission (KPPU) in the merger guidelines, it divides the level of market concentration into 2 spectrums based on the value of IHL. Spectrum I (low concentration) with HHI value below 1,800 and spectrum II (high concentration) with HHI value above 1,800 (KPPU, 2020). This is also in line with according to the U.S. Department of Justice & FTC, where IHL values between 1,500-2,500 are moderately concentrated, IHL

values of more than 2,500 are highly concentrated (U.S. Justice Department, 2015). So that from the calculation of IHL peer to peer lending companies of 629.945% is the size of companies in low concentration markets.

➤ *Barriers to entry*

Barriers to entry are measured using the Minimum Efficiency Scale (MES). MES is a condition where the addition of output produced will cause a decrease in production costs in the long run. The formula used to measure MES can be seen in the following equation:

$$MES = \frac{\text{Average 4 largest enterprise outputs}}{\text{Output Total}} \times 100\%$$

$$MES = \frac{59.678.457.874.813}{585.819.912.237.824} \times 100\% = 10,19\%$$

Based on the calculation of MES, the result of MES or market entry barriers is 10.19%. According to Alistair (2004), if MES has a value of more than 10% then it illustrates that the barriers to entry into the market are high. The MES value is known to be 10.19% which means that the industry has a fairly high barrier to industry entry with an MES value above 10%. These results indicate that the market entry barriers to the P2P lending industry are quite high. Where new companies or competitors will enter the P2P lending industry

if they have the capital strength to be able to produce output more than the MES value, which is 10.19%. In 2023, the MES value is 10.19%, meaning that new companies must produce output of more than Rp. 57,489,687,167,598 (57.4 trillion rupiah more) (10.19% of the total Rp. 585,819,912,237,824) to enter P2P lending companies in Indonesia.

*B. Correlation of Peer to Peer Lending Structure and Behavior in Indonesia*

Based on the results of the selection of panel data regression models carried out through the lagrange multiplier test, chow test and hausman test, it can be concluded that the panel data regression estimation method used is as follows:

Table 5: Model Selection Test Conclusion Results

Pengujian	Keterangan	Kesimpulan
Uji Chow	Ho : Model CEM yang sesuai (nilai prob > 0.05) Ha : Model FEM yang sesuai (nilai prob < 0.05)	<b>0,000 &lt; 0,05 (FEM)</b>
Uji Hausman	Ho : Model REM yang sesuai (nilai prob >0.05) Ha : Model FEM yang sesuai (nilai prob < 0.05)	<b>0.0649 &gt; 0,05 (REM)</b>
Uji Legrange Multiplier	Ho: Model CEM yang sesuai (nilai prob >0.05) Ha: Model REM yang sesuai (nilai prob < 0.05)	<b>0.000 &lt; 0,05 (REM)</b>

Data processed (2023)

The results of the panel data regression model selection test for the three panel data models above aim to strengthen the conclusions of the panel data regression estimation

method used. Based on the table above, it can be concluded that the panel data regression model used is a random effect model to analyze the data in this study.

Table 6: T Test Results (advertising costs with market share)

Variabel	Coefficient	T-statistic	Prob
C	-0.730401	-1.023625	0.3072
LN_X	0.082289	2.486365	0.0137

Data processed (2023)

The statistical t test for the variable advertising cost yields a calculated t value of 2.486 > table t of 1.971 and a probability value of 0.0137 less than the alpha value (0.05).

Then H1 is accepted and H0 is rejected, meaning that the variable advertising cost is positively correlated with the market share variable.

Table 7: T Test Results (market share with interest rates of fintech companies in Indonesia)

Variabel	Coefficient	T-statistic	Prob
C	0.861558	2.322771	0.0225
LN_X	1.169827	0.878013	0.3823

Data processed (2023)

The statistical t test for the interest rate variable yields a calculated t value of 0.878 < t table of 1.98 and a probability value of 0.38 greater than the alpha value (0.05). Then H1 is

rejected and H0 is accepted, meaning that there is no correlation between the interest rate variable and the market share variable.

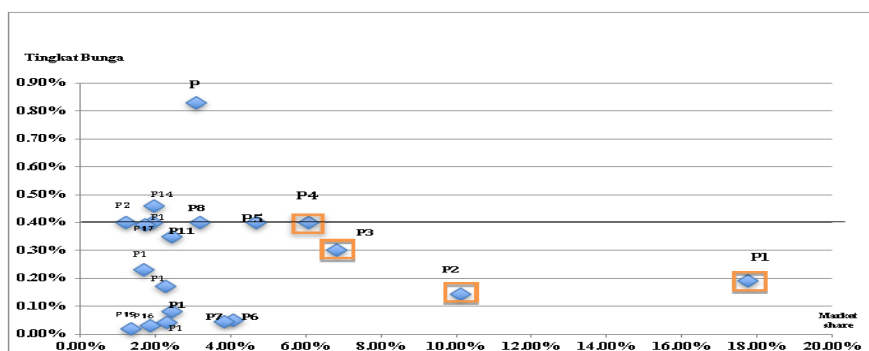


Fig. 4: Graph of Market Share Relationship with Interest Rate 20 Companies with the Largest Market Share of P2P Lending in Indonesia

The figure shows a graph of the market share relationship with the interest rates of the 20 companies with the largest market share of P2P lending companies in Indonesia (P1-P20). If sorted, companies with the largest market share are Lentera Dana Nusantara, Asetku, KrediFazz, Kredit Pintar, EASYCASH, AdaKami, BATUMBU, RUIPAH FAST, KoinP2P, Findaya, DanaRupiah, investree, UangMe, Danamas, ModalRakyat, amarnya, Indodana, JULO, Akseleran and AdaPundi.

In the graph in figure 4.2 it is shown that of the 20 companies with the largest market share of P2P lending companies, the highest interest rate per day is from P2P Coin (P9) companies which is 0.83% per day. The lowest interest rate per day is from the company Akseleran (P19) with an interest rate of 0.02%/day. On the chart, it can be seen that companies that follow the OJK's policy of setting an interest rate of 0.4% per day are Kredit Pintar (P4), Easy Cash (P5), Fast Rupiah (P8), Danamas (P14), People's Capital (P15), and AdaPundi (P20).

In the graph in figure 4 it is shown that the company that is ranked first for the largest market share (P1), sets an interest rate of 0.19% / day. Companies that are at the second tier for the largest market share (P2), set an interest rate of 0.14% / day. Companies that are in the third tier for the largest market share (P3), set an interest rate of 0.3% / day. Companies that are in the fourth tier for the largest market share (P4), set an interest rate of 0.4% / day. Where, from the four largest companies in the P2P lending industry set interest according to OJK policy, which is a maximum of 0.4% / day.

Judging from the chart, it can be concluded that there is no correlation between market share and interest rate. Some companies set interest rates by doing credit scoring or assessing the creditworthiness of prospective borrowers. Before the borrower makes a loan, the platform will conduct a credit scoring by providing an A-C rating that describes the risk of the investment. A-rated loans are the safest risk loans, while C-rated loans have the highest risk to be funded. These loan ratings are also tied to their interest rates. The higher the risk borne, the higher the yield received by the lender and the higher the interest rate charged to the borrower.

### C. Implications of Research Results

#### ➤ Market structure of fintech companies in Indonesia

From the results of tests that have been carried out using concentration ratio indicators (CR<sub>n</sub>) and HHI, the results are that the value of CR<sub>4</sub> with a value of 40.75%, CR<sub>8</sub> with a value of 56.51%, CR<sub>20</sub> with a value of 80.78%, CR<sub>30</sub> with a value of 89.69%, CR<sub>55</sub> value of 97.50%, CR<sub>88</sub> of 99.89% shows that the peer to peer lending industry in Indonesia has a moderate low concentration with type IV oligopoly (Bain; Sutarta, 1995). In the calculation of the IHL method of 102 companies obtained an average value of 629.945% which shows that the P2P lending industry has a low concentration.

In the book "Industrial Economy" by Jaya (2019), the characteristic of an oligopoly market is that it has a high barrier to entry. This statement is in accordance with the results of research using the MES indicator, which states that if the value of the MES is greater than 10%, the barrier to

entry into the market is high. The results stated that the MES value was 10.19%. This means that the P2P lending industry is included in the type of oligopoly market that has high barriers to entry. New competitors will find it difficult to enter the market, unless they are sure that they can gain an advantage after entering the market. New competitors must also be able to disburse loans above Rp. 57,489,687,167,598 (57.4 trillion rupiah more) (10.19 of the total Rp. 585,819,912,237,824) to survive in this industry.

#### ➤ Behavior of fintech companies in Indonesia

Behavior of the P2P lending industry in Indonesia OJK in the implementation of P2P lending has appointed the Indonesian Joint Funding Fintech Association (AFPI) as OJK's strategic partner. The Indonesian Joint Funding Fintech Association (AFPI) which is an association of LPMUBTI (Information Technology-based Money Lending and Borrowing Services) organizers in Indonesia has the authority to determine the amount of loan interest and other costs called the Code of Conduct for Providing Information Technology-Based Money Loan Services Responsibly (Code of Conduct).

The Code of Conduct contains additional rules that have not been accommodated in the LPMUBTI POJK and are binding for the organizers. The code of conduct established by AFPI is binding for organizers because every P2P lending organizer must be registered as a member of an association that has been appointed by the OJK, which in this case is AFPI. Based on the code of conduct from AFPI, the amount of loan interest given to debtors is 0.4% per day (maximum limit). Plus there is a provision that the total amount of fees, late fees, and all other costs is a maximum of 100% of the principal value of the loan.

As many as 22 companies or 21.56% of all online loan companies set a loan interest of 0.4% / day. As many as 63 companies or 61.76% of all online loan companies set daily loan interest below 0.4% per day. As many as 3 companies or 2.94% of all online loan companies set daily loan interest above 0.4% per day (PinjamModal, KTA Kilat and Boost companies). As many as 2 companies or 1.96% of all online loan companies set daily loan interest between less than 0.4% and more than 0.4%, which depends on the borrower's credit risk assessment. Of the 4 companies with the largest market share, they have followed the policy set by the OJK, namely by setting the interest rate per day for borrowers below 0.4%.

Advertising costs incurred by 102 P2P lending companies from 2021 to 2022 have an average of more than 2.3 trillion Rupiah. Meanwhile, the difference in advertising costs of 102 fintech companies between 2021 and 2022 is more than IDR 1.6 trillion. This means that in the P2P Lending industry, companies spend quite a lot of money to promote the products they sell, namely online loans.

In the 4 largest peer to peer lending companies in Indonesia, Lentera Dana Nusantara carries out a vertical restraint strategy by collaborating with other companies, namely Shopee E-commerce to complement the products produced by Shopee companies in terms of payment. In the Asetku company, the behavioral strategy carried out is vertical integration where Asetku is the business line of



Akulaku E-commerce. Asetku is presented to complement the production of Akulaku where my assets become one of the products or payment instruments for Akulaku e-commerce. In addition to being e-commerce, akulaku is an online loan with a high limit. The behavioral strategy carried out by asetku is product differentiation where my assets and akulaku are in the same company and produce similar products, namely online loans.

In Kredi Fazz, the behavioral strategy carried out is product differentiation where Kredifazz and Kredivo are sister brands that are in the same company. Both companies sell the same product, namely online loans.

In smart credit companies, the behavioral strategy carried out is product differentiation where smart credit is a sister brand of atome that is in the same company. Both companies sell the same product, namely online loans.

#### ➤ *Correlation of Structure and Behavior of Fintech Companies in Indonesia*

The results showed that market structure and behavior were directly positively correlated. The results of the analysis of the P2P lending industry show that this industry belongs to the type of oligopoly market where there are high barriers to entry. Barriers are complex in which large barriers can strengthen the market power of a dominant firm. New competitors or old competitors with a small market share will be difficult to operate, so in this market raises the behavior of a company to win the competition or to strengthen its business.

The behavior carried out by the Company in the P2P lending industry is price and non-price behavior. Non-price behavior using advertising costs of 102 companies shows a straight relationship, namely if the market share of an industry is high, then the advertising costs incurred are also high. This is evidenced from the results of research with the t test, which is a probability value of  $0.0137 < 0.05$ , then H1 is accepted and H0 is rejected, meaning that variable x (advertising costs) affects variable y (market share).

If a company sets high advertising costs, this will increase the company's market share. Advertising serves to convey information from the company to consumers and maintain market share. Some companies that are already well-known and control market share still spend money to make advertisements, for example, such as Coca Cola. This is so that with advertising consumers are always reminded of the existence of products or services owned by a company, so that the company is still able to maintain sales owned or maintain market share.

Advertising also makes consumers know the existence of products or services from the company, even knowing about the advantages of the product or service concerned. P2P lending companies that have been licensed by the OJK produce advertisements to provide information to consumers that the company has online loan products that are legal and licensed and supervised by the OJK. As a result, with advertising, companies not only provide the desired information to consumers, but also attract consumers to use the product.

#### ➤ *Correlation of market share with interest rates of fintech lending companies in Indonesia*

The results showed that there was no correlation between market share and interest rate. This is evident from testing the hypothesis test with the t test showing a probability value of 0.38 greater than the alpha value (0.05). Then H1 is rejected and H0 is accepted, meaning that there is no correlation between the interest rate variable and the market share variable. This result is also evident from testing using a graph that connects market share with interest rates, which results in no correlation between the two variables.

This shows that companies with large market shares can grab high market share, not because the company sets a low interest rate. This is evidenced by the company with the highest market share, Lentera Dana Nusantara, setting an interest rate ranging from 0-0.19% / day. Meanwhile, from the data obtained, it can be seen that the lowest interest rate of P2P lending companies is 0.0176% of LoanGO companies which ranks 31 out of 102 in companies with the largest market share of the peer to peer lending industry in Indonesia. The interest rate on this P2P lending company is very competitive, which is around 0.4% / day in accordance with the policies regulated by the OJK. This P2P lending company also sets an interest rate depending on the credit scoring / creditworthiness assessment given to borrowers before lending on the P2P lending platform.

#### *D. Conclusions and suggestions*

Empirically, the structure of peer to peer lending companies in Indonesia is oligopoly. The cause is the concentration level marked by CR values in 2023. The market for P2P lending companies in Indonesia is concentrating low during 2023. The P2P lending industry has a high barrier to entry of 10.19%. Where the new company must be able to produce output or total loan disbursement of more than Rp. 57.4 trillion (Rp. 57,489,687,167,598 which is 10.19% of the total Rp. 585,819,912,237,824) to be able to enter P2P lending companies in Indonesia.

Behavior in this industry is seen from price competition, non-price and other behavioral strategies. On the price behavior i.e. the interest rate, 102 companies set the interest rate ranging from 0.01-1.33%/day. In non-price behavior, namely advertising costs, from 2021 – 2022, the p2p lending industry spends an average of 2.3 trillion advertising costs to conduct non-price competition between companies. In other behaviors, the 4 largest P2P lending companies carry out vertical integration strategies, vertical restraints, and product differentiation.

The correlation between market share and advertising costs is positive. This proves that if the market share value of a company is high, the advertising costs incurred by the company are also high.

There is no correlation between market share and interest rate. This happens because the interest rate in this industry is set by OJK, which is 0.4% / day. This makes the interest rate between companies very competitive and the interest rate given to borrowers must go through the credit scoring process first.

Limitations in this study, it is hoped that future studies can obtain other variables that can be used as measurements for structure and behavior in this industry.

In the P2P lending industry, see the existing industrial competition conditions in Indonesia as one of the guidelines in regulating effective strategies to be able to compete with other companies.

New and small companies are expected to pay attention to their liquidity capabilities because this industry requires large enough capital so it is expected that new companies can take advantage of technological advances and new strategies to keep up with existing developments

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