

SYSTEMATIC LITERATURE REVIEW ON PEER-TO-PEER LENDING: A COMPARISON BETWEEN TRADITIONAL LENDING AND DECENTRALIZED FINANCE MODELS

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Abstract: *This research aims to conduct a comparative study between the peer-to-peer lending system and the traditional loan model. The method used is a systematic literature review study of 61 relevant scientific papers published between 2015 and 2024. The parameters analyzed include the provision of access to finance, transaction costs, the speed of the lending process, as well as the level of transparency and consumer protection. The results show that the peer-to-peer lending system has advantages in terms of providing easier and faster access to financing for individuals and small businesses because it uses a simple and uncomplicated digitization process. This model is also able to reduce transaction costs and speed up the process through the application of Block chain technology that streamlines the flow of transactions. The implications of this research indicate that peer-to-peer lending offers faster and easier access to financing for borrowers. However, the challenges of immature financial regulations and the rapidly evolving cyber security risks still need to be addressed to support the wider adoption of peer-to-peer lending as a new alternative in the financial services industry. Therefore, further research is needed to find solutions to these barriers so that peer-to-peer lending can be optimally utilized as an inclusive future financial solution.*

Keywords: Decentralization Finance, Peer-to-peer lending (P2P), Traditional Lending.

INTRODUCTION

With the advent of technology technologies, the financial environment has experienced substantial changes that have given rise to novel lending structures. Among these, peer-to-peer (P2P) lending and decentralized finance (DeFi) have garnered considerable attention as alternatives to traditional lending mechanisms. This systematic literature review aims to compare traditional

lending models with these novel approaches, focusing on their operational frameworks, advantages, and challenges.

Traditional lending has long been dominated by banks and other financial intermediaries, which play a crucial role in connecting lenders and borrowers, performing asset transformation, and monitoring debtors ([Domotor & Olvedi 2021](#)). However, the 2008 financial crisis exposed vulnerabilities in the

traditional banking system, prompting the exploration of alternative financing methods. P2P lending emerged as a viable solution, leveraging online platforms to facilitate direct lending between people without the use of customary financial middlemen ([Domotor & Olvedi 2021](#)). This model has been particularly beneficial for small borrowers with limited assets, offering them access to funds that might otherwise be unavailable through conventional credit markets ([Liu et al. 2020](#)).

In parallel, The development of Blockchains technology has made DeFi possible, a decentralized peer-to-peer system that operates on smart contracts and Blockchains protocols ([Tang 2023](#)). DeFi eliminates the need for intermediaries by enabling automated, transparent, and secure financial transactions. Platforms like Compound exemplify the DeFi lending model, where borrowing rates are determined in real-time based on market supply and demand, and transactions are executed through smart contracts ([Tang 2023](#)). This innovation not only enhances efficiency but also reduces transaction costs and the need for credit history checks ([Kaplan et al. 2023](#)).

Despite their potential, both P2P lending and DeFi face unique challenges. P2P platforms must navigate regulatory landscapes and manage risks associated with borrower defaults and platform performance ([Basha et al. 2021](#)) and ([Babaei & Bamdad 2020](#)). DeFi, on the other hand, must address issues related to legal standards, cultural differences, and the inherent risks of Block chain technology ([Kaplan et al. 2023](#)). Moreover, the debate between self-regulation and stricter financial oversight continues to shape the evolution of these models ([Basha et al. 2021](#)).

However, despite its promising potential and benefits, P2P lending in Block chain systems is also faced with a number of challenges. As P2P landing is an emerging field, there is little existing research on the subject, particularly on lending and comparison with

traditional systems. Some papers explain how DeFi lending protocols and crypto shadow banking work such as research from ([Saengchote 2023](#)); ([Castro-Iragorri et al. 2021](#)); and ([Tang 2023](#)) generally investigating DeFi (Decentralized Finance Model) systems with centralized finance. However, most papers only mention the comparison in use. In contrast, our paper first, this study evaluates how access to finance providers is densely populated in peer-to-peer landing systems compared to traditional systems. Second, this research offers understanding of how transactions improve the speed of the lending process using peer-to-peer landing and traditional landing. Furthermore, the scalability and performance of the Block chain system in enhancing transparency, security and consumer protection compared to the traditional system. Through the literature review method, this research will compare peer-to-peer landing and traditional landing systems. It is hoped that the results of this study can provide a better understanding of the concept and provide important insights for further development and adoption in the financial industry. Based on the flowing of questions, we researchers try to answer the following questions (RQ):

RQ₁: How does the provision of access to finance in peer-to-peer landing compare with the traditional loan model?

RQ₂ : How the peer-to-peer lending transaction model reduces transaction costs and increase the speed of the borrowing process compared to the loan model Traditional?

RQ₃ : Can decentralized finance (DeFi) models in peer-to-peer lending improve the quality of peer-to-peer lending transparency, security, and consumer protection compared to loan models Traditional?

Blockchain Technology

Among Industry 4.0 technologies include Block chain, edge cloud, industrial cyber

security, big data, and additive manufacturing ([Vafadarnikjoo et al. 2023](#)) Blockchains stores data in the form of blocks that will be distributed throughout the operating network in a decentralized manner ([Tsolakis et al. 2023](#)). A democratic and decentralized database for storing electronic information in digital form ([Gasper 2018](#)) and ([Mourtzis et al. 2023](#)). As such, Block chain databases provide an opportunity for individuals to engage in decision-making processes and data management, without reliance on a central authority.

Since Blockchains is a public, transparent ledger of business transactions, most systems have a full copy of the network available ([Taloba et al. 2023](#)). Additionally, this technology offers a dependable and secure platform for data management across a range of application areas ([Sharma et al. 2023](#)). The primary innovation of Bitcoin is its capacity to show that it is possible to conduct value transactions remotely without the need for a trustworthy middleman who can conduct verification ([Handayanto et al. 2024](#)). With its reliability, security, and transformational potential, Block chain technology continues to gain widespread attention and is considered one of the important pillars in the development of Industry 4.0 and the digital future.

Decentralized Finance Model or Peer-to-peer lending (P2P)

The present business flow is made simpler and more effective by technological advancements, particularly in the P2P lending industry ([Legowo et al. 2023](#)). In the P2P lending industry, technology has enabled direct funding between borrowers and investors through online platforms. As a result, there is no longer a need for conventional middlemen, such traditional financial institutions, and the related costs and complexity are decreased. Peer-to-peer lending has become a popular choice for investors seeking better rates of return ([Mondal et al. 2023](#)). P2P allows users of the internet to borrow money from one another without the involvement

of conventional financial institutions ([Siering 2023](#)). However, despite all the advantages of peer-to-peer lending, it remains an emerging industry with many risks and uncertainties ([Sulastrri & Janssen 2023](#)).

In Blockchains technology, there are alternative transaction possibilities beyond the transfer of cryptocurrencies, such as automated execution of smart contracts and secure exchange of encrypted data. Cryptocurrencies like Ethereum and Bitcoin have the ability to lower transaction costs, speed up transactions, and give unbanked or underbanked people and enterprises access to the financial system ([Khan et al. 2023](#)). Blockchains-based systems can enable data exchange which is real-time and distributed to different types of nodes ([Yadav & Deshpande 2023](#)). Blockchains in managing smart contract transactions is attracting the interest of all sectors in the era of transformation ([Mohammed et al. 2024](#)). By enabling automated execution and high transparency, Blockchains technology has the ability to completely change how companies run and carry out contracts.

Traditional Lending

Traditional lending is a conventional or traditional method of lending ([Danisman & Tarazi 2024](#)). In traditional lending, the credit application and approval process still relies heavily on manual analysis (judgmental approach) conducted by credit officers and regulated by the financial services authority ([Junarsin et al. 2023](#)). Factors that are taken into consideration in traditional lending include the character of the prospective borrower, capital owned, collateral security, payment capacity, and general financial condition. Conventional/traditional lending through financial institutions such as banks as opposed to peer-to-peer lending which is the provision of credit directly online between borrowers and lenders without involving financial institutions ([Calabrese et al. 2019](#)).

METHOD

The Systematic Literature Study is the most appropriate methodology for this article. A systematic literature review (SLR) was carried out in order to accomplish our research goals. The studies of [Nerantzidis et al. \(2022\)](#) served as inspiration for this. SLR is a strategy used in social science research to collect data by identifying, analyzing, and interpreting study areas related to a given topic or phenomenon of interest. The following procedures are involved in this systematic literature review research project: criteria for eligibility, sources of information, strategy for the search, and process for selection ([Martins & Belfo 2023](#)). Following database searches, titles, abstracts, and full-text publications were independently examined to ensure they met the requirements for eligibility ([O'Mahoney et al. 2023](#)). This field of study is close to our research. Following the model in the study [Firmansyah & Umar \(2023\)](#) and [Nerantzidis et al. \(2022\)](#) by setting the research question and conducting a series of identification processes, data and database search strategies, inclusion criteria and study selection, exclusion criteria, and inclusion screening to obtain the most relevant studies to respond to our inquiry for study. Peer-to-peer lending (P2P), traditional lending, and decentralization finance are the three main terms covered in this study. P2P, or peer-to-peer lending, is an internet financing model that allows individuals to directly borrow and lend money to each other through online platforms without involving financial intermediaries. Traditional Lending denotes conventional lending through financial institutions. Meanwhile, Decentralization Finance aims to eliminate the role of financial institutions by facilitating financial services such as lending and payments through Block chain technology in a decentralized manner using smart contracts.

Search Strategy and Database

A predetermined list of keywords used to search the database is called a search strategy. Search principles are included into a search strategy in order to generate precise outcomes. The search plan additionally considers all possible search terms, keywords and phrases related to the topic to guide in selecting literature searches during the reading of titles, abstracts or full texts ([Salih et al. 2021](#)). After establishing the research topic, objectives, evaluating the quality, and synthesizing the findings, the search method is decided ([Hiebl 2023](#)). Because of this, only noteworthy data were considered while selecting relevant papers for our research. The search parameters in this study are followed by the reach of the scientific repositories Scopus, EBSCO, IEEE, Sage Journal, Web of Science (WoS), Crossref, and Google Scholar, ACM Digital Library, Eduvest, Emerald, MDPI, PubMed, Springer, SSRN, Wiley Library Online, Taylor & Francies. Therefore, we employed the SLR methodology, which was inspired by [Nerantzidis et al. \(2022\)](#) concentrated on journal papers published between 2015 and 2024 since this research is relatively new, we limit the publication time of the articles so that the review will focus on the latest relevant research and more accurately reflect the potential and challenges of the P2P lending model. We obtained a result of 328 articles. After defining the search space, keywords were defined to narrow down the scope of the study ([Kuhail et al. 2023](#)). The keywords considered were Block chain technology, peer-to-peer lending (P2P) system traditional lending, and decentralization landing. As a result of the search process and selection criteria based on years of publication and keywords, we retrieved 61 relevant articles (figure 1)

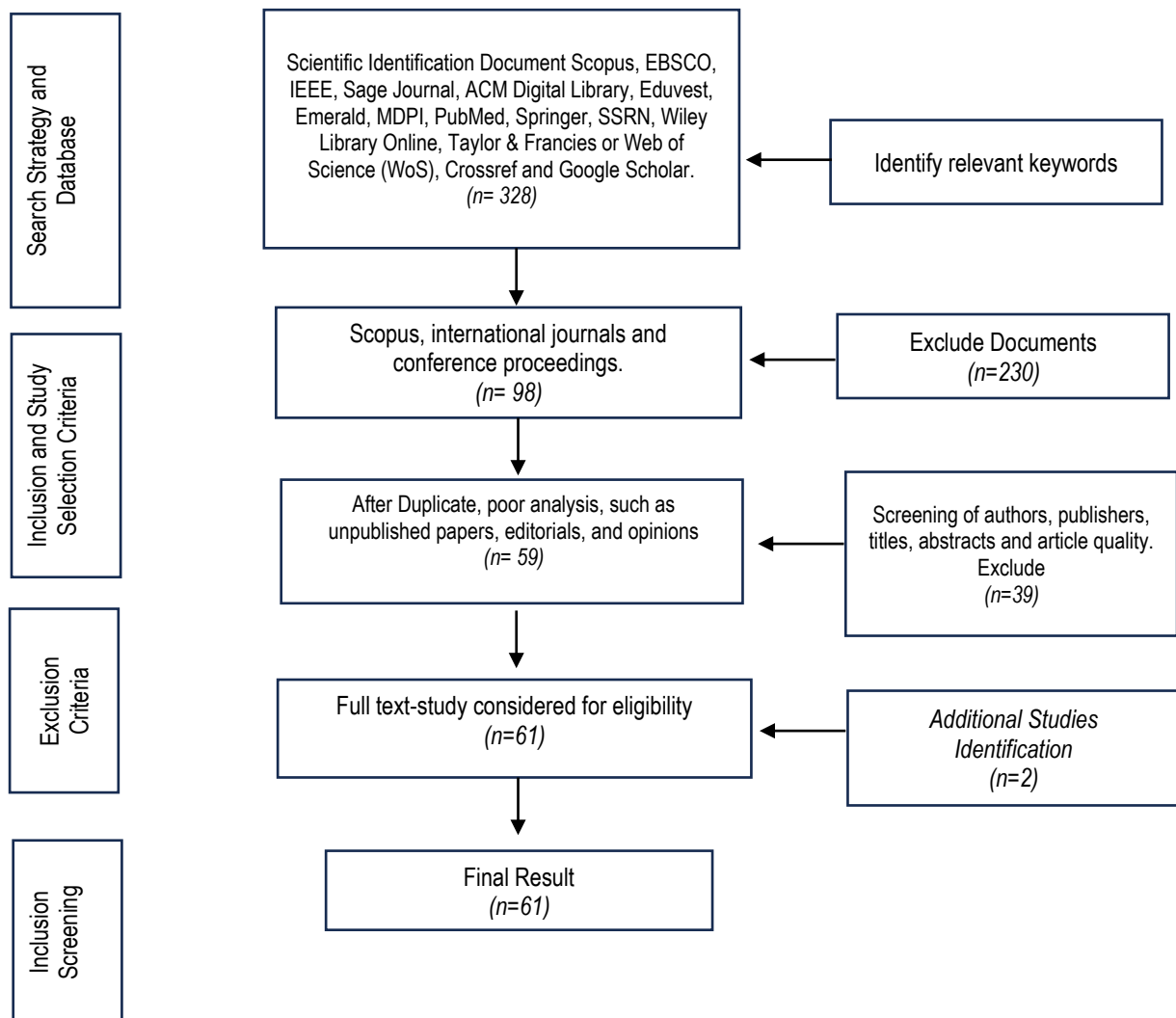


Figure 1. Document Selection Process

Study Inclusion and Selection Criteria

Studies to be included in this SLR must meet the established inclusion criteria (Simarmata et al. 2024); (Susanto et al. 2022); and (Rudyanto 2021). Studies that pass the keyword screening will undergo a full manuscript review process to determine final eligibility. The references of selected studies will also be checked to identify additional studies that may be relevant. At this stage we obtained 98 journals for further review. In order to screen the following selection criteria were applied to pertinent papers, inspired by (Salih et al. 2021) They include:

- (1) A study on peer-to-peer lending (P2P lending) or decentralized finance (DeFi) models;
- (2) A study comparing the P2P lending or DeFi model with the traditional lending model;
- (3) Studies published in English between 2015 and 2024; and
- (4) Studies in the form of scientific journal articles, conferences, Scopus, and conference proceedings. Studies that do not meet the inclusion criteria will be excluded from the review process.

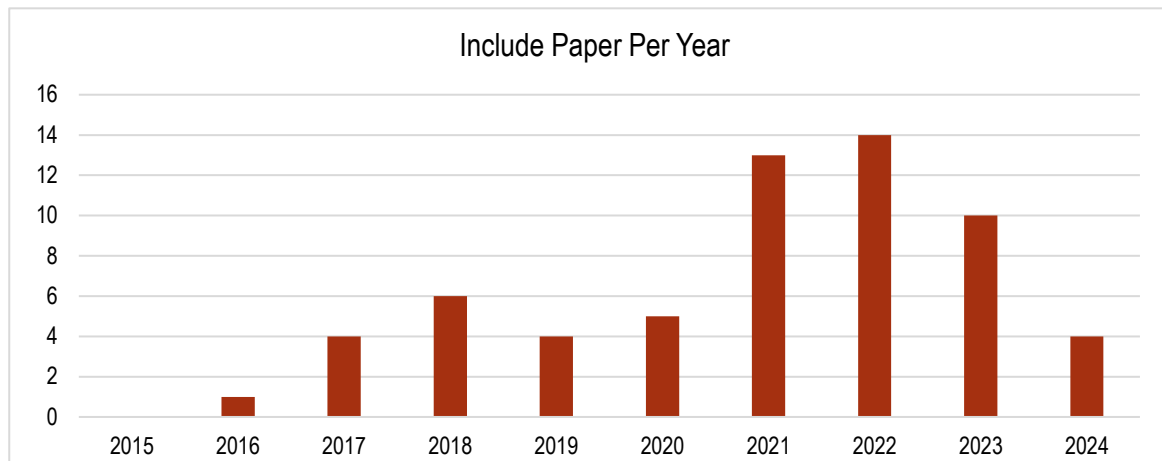


Chart 1. The Distribution of Related Research by Year of Publication

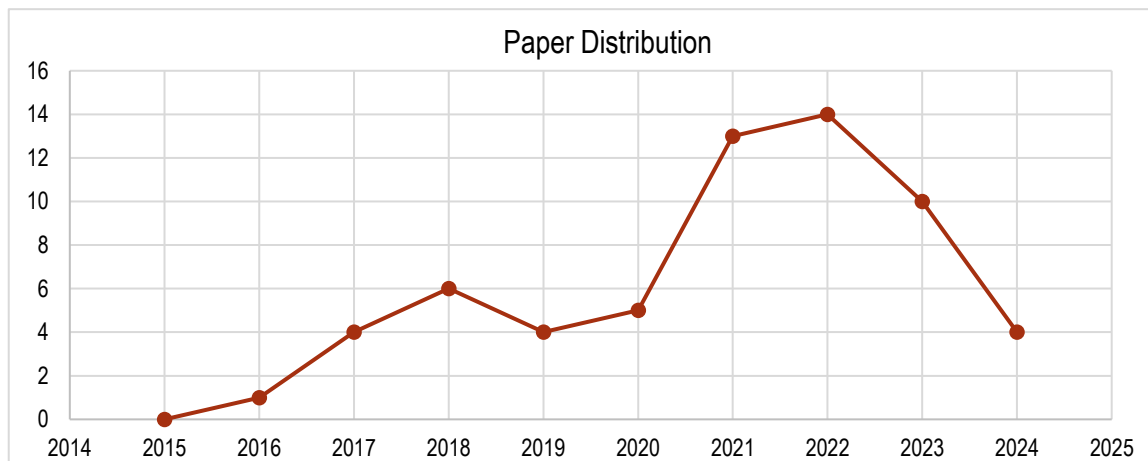


Chart 2. Number of Publication Per Journal

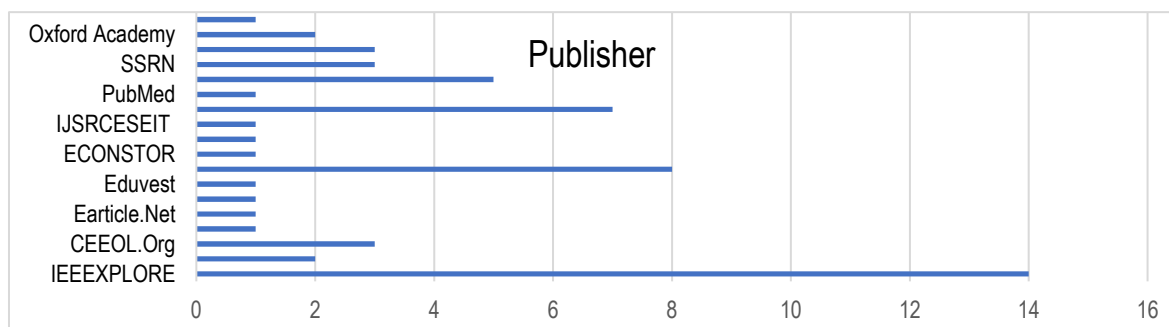


Chart 3. Publication Per Journal

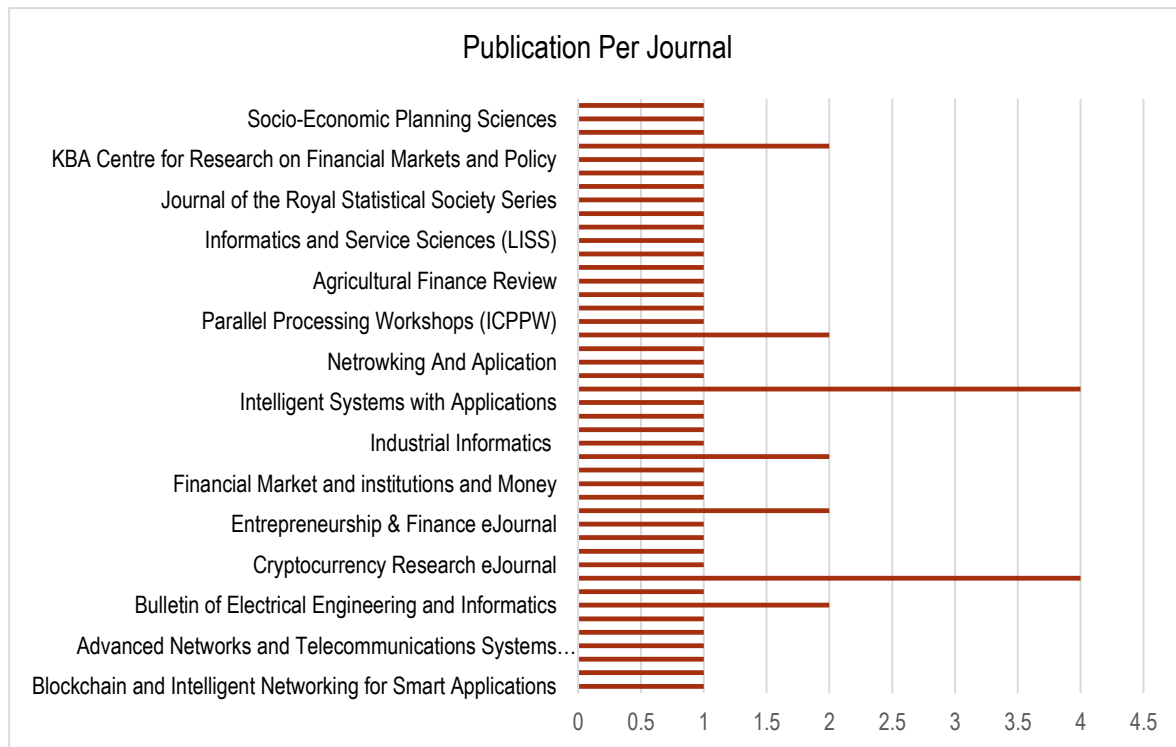


Chart 4. Number of Publication Per Journal

Exclusion Criteria

In a SLR, exclusion criteria are one of the important components used to select studies to be included in the systematic review. In addition to the inclusion criteria described earlier, researchers also need to establish clear exclusion criteria to eliminate irrelevant studies. In addition to eliminating similar publications, researchers also need to remove studies that are deemed to be of poor quality or irrelevant to the purpose of the systematic review. This can be done by manually conducting bibliometric analysis, such as examining citation patterns, topic novelty, and relevance to the research question. Publications that fall outside the main focus or address topics that are not aligned with the pre-defined inclusion criteria should be removed. In addition, researchers also needed to exclude types of publications that were considered to be of low quality, such as editorial papers, opinion pieces, and documents that were not formally published. The results

obtained were from n=98 journals to 59 scientific papers.

Inclusion Screening

From the two subject areas of search we obtained 59 articles (n=59) to be included in the further process which were inspired by [\(Firmansyah & Umar 2023\)](#). Further screening is done to see the article as a whole starting from author, publisher, title, abstract and article quality which focuses more on the Scopus index, International Journal, and Conference Proceedings. The authority of the author, the reputation of the publisher, and the significance of the research topic were all taken into consideration while selecting these books. These books were used to enrich the review of the literature and expand the theoretical knowledge of the subject being studied. The entire literature selection and screening process was systematic and comprehensive to ensure that only high-quality sources would be included

in the further analysis. This is important to maintain the quality and reliability of research results to be obtained. The number of books added was 2 books (n=2) published by [Antipova \(2020a\)](#) and [Maurizio, Pompella, Roman \(2021\)](#) making the total number of references used 61 (n=61).

Result & Discussion

RQ₁: How does providing access to finance in peer-to-peer lending compare to traditional lending models?

One of the striking differences between peer-to-peer lending and traditional lending models lies in the technology used (table 1). Several studies reveal that peer-to-peer lending can be built using Blockchains technology, which can increase the scalability, decentralization, and transparency of the lending process ([Ali et al. 2021](#)); ([Arora & Kaur 2021](#)); ([Rabbi et al. 2021](#)); and ([Iacoviello & Bruno 2023](#)). This Block chain technology enables the creation of a decentralized platform, where lending and borrowing transactions can be conducted directly between borrowers and lenders without the need for intermediaries. This is in contrast to traditional lending models that tend to rely on

more centralized infrastructure and systems, where banks or financial firms function as middlemen.

Peer-to-peer lending is an online financing model that allows individuals to borrow and lend money to each other without going through a financial intermediary. Several studies have examined efforts to increase access to financing in this model. Research [Chen et al. \(2017\)](#) proposed an improved P2P file system scheme based on IPFS and Blockchains to improve data access for P2P actors. While [Patil et al. \(2022\)](#) discussed the application of Block chain technology which is expected to develop P2P lending and borrowing systems, improve processes, and reduce costs.

In addition, peer-to-peer lending platforms also show differences in their business models. Traditional lending models rely more on financial intermediaries, especially banks, as the main source of funding. However, research shows that banks that allocate a lot of assets to traditional lending have a low correlation of earnings with traditional lending ([Zedda et al. 2020](#)). In addition, the potential for bank customers to switch to fintech financing services is also quite large, reaching 98.82%. ([Afandi & Muta'ali 2019](#)).

Table 1. Paper based on access to financing in peer-to-peer lending and traditional lending

Author	Main Findings
(Chen et al. 2017)	putting out a better IPFS and block chain based P2P file system scheme by involving content providers and redesigning the data storage model
(Sagirlar et al. 2018)	Proposed P2P a botnet detection scheme for IoT using Block chain and community detection
(Wang et al. 2021)	Create a peer-to-peer Block chain network simulation framework to test large-scale Block chain applications and consensus protocols without the expense of physical deployment. Show how the outcomes of IOTA, Bitcoin, and Ethereum simulations function with actual networks.
(Rangelov et al. 2021)	This research designs and specifies a Block chain-based P2P energy trading platform, enabling renewable energy producers and consumers to conduct energy trading transactions directly via Block chain.
(Jayasuriya, Daluwathumullagamage & Sims 2021)	This research conducted a systematic review of 407 articles related to the use of Block chain in banking

Author	Main Findings
(Ali et al. 2021)	In order to improve scalability and decentralize the prosumer clustering mechanism in peer-to-peer Block chain energy trading, this study suggests the Synergy Chain concept.
(Kholidah et al. 2022)	Mapping the literature on peer-to-peer lending and providing direction for further development.
(Nelaturu et al. 2022)	This article presents an overview of Block chain technology's application in the Fintech sector, categorizes Block chain-based Fintech use cases, examines problems and obstacles, and makes recommendations for future research.
(Renduchintala et al. 2022)	The research analyzed the applicability of Block chain to three FinTech segments: payments, savings and loans, and investment management.
(Gu et al. 2022)	Chinese platforms evolve from information intermediaries creating a theoretical framework to investigate peer-to-peer lending platform regulation and competition.
(Widyanto et al. 2022)	The findings demonstrate that through perceived usefulness, perceived structural assurance and perceived ease of borrowing have an indirect impact on continuity intention to borrow.
(Patil et al. 2022)	This research discusses how Blockchains technology can be applied to develop peer-to-peer (P2P) lending and borrowing systems. Blockchains is proposed to improve the P2P process through smart contracts, decentralized transaction recording, and reduced costs.
(Garg 2023)	This research assesses the potential of decentralized finance by utilizing the Ethereum platform as an alternative to traditional finance.
(Afandi & Muta'ali 2019)	There is a 98.82% chance that FinTech financing will replace traditional bank loans for customers.
(Zedda et al. 2020)	According to this study, banks that devote a larger portion of their assets to traditional lending have a poorer association with comprehensive income, which reduces systemic stability.
(Nuzulia 2020)	Analyzing the rationality of the four pillars of traditional financial intermediation, namely SME lending, insured deposits, access to lenders of last resort facilities, and prudential supervision, within the framework of optimal mechanism design theory.
(Suryani et al. 2021)	The study found that the intensity on the connection between microlenders and micro-borrowers has a positive effect on credit access, but not a significant effect on credit terms.
(Dermeineur 2022)	Peer-to-peer credit markets (between individuals) were a major source of funding before the emergence of formal banking institutions and peer-to-peer credit networks are large and dynamic.
(Li et al. 2021)	The research found that banks with more diversified sources of revenue tend to be more profitable and financially stable.
(Pavón Pérez et al. 2023)	The proposed covariance analysis-based approach effectively identifies data attributes containing sensitive information and reduces bias in machine learning models while keeping their overall functionality.

This indicates that access to funding in traditional lending is more limited. Research indicates that these platforms tend to adopt a more technology-oriented and platform-based business model, shifting away from traditional information intermediaries (Gu et al. 2022). In this business model, peer-to-peer lending platforms act as facilitators that provide digital tools and infrastructure to bring borrowers and lenders together, and manage the lending process. This is different from the traditional lending model, which relies more on financial institutions as financing service providers.

This distinction is in line with the history of the modern financial model. Before the banking era, P2P credit markets were the main source of access to public finance, and P2P credit networks were large and dynamic (Dermineur 2022). Contrary to the traditional lending model, its dependence on banks leads to centralized access. Several studies have also designed platforms to facilitate direct energy trading through Blockchains technology between green energy producers and consumers (Rangelov et al. 2021). Similar platforms are expected to improve access to finance for green energy producers and consumers.

Proposing a P2P botnet detection scheme for IoT using Blockchains and community detection (Sagirlar et al. 2018). Designed a peer-to-peer Blockchains network simulation framework to test consensus protocols and Blockchains applications with a large number of nodes without the cost of physical deployment, and demonstrated the compatibility of Bitcoin, Ethereum, and IOTA simulation results with the real network (Wang et al. 2021). Research Ali et al. (2021) also put forth the Synergy Chain paradigm, which aims to improve scalability and decentralize prosumer clustering in Blockchains-based peer-to-peer energy trading. Additional research delves into the application of Block chain technology in the development of peer-to-peer (P2P) lending and borrowing systems. Block chain is proposed to

improve the P2P process through smart contracts, decentralized transaction recording, and reduced costs (Patil et al. 2022). There are several Block chain networks used in peer-to-peer landing systems using Block chain. One of them is to utilize a decentralized financial network by utilizing the Ethereum platform as an alternative to traditional finance (Garg 2023).

Furthermore, the impact of these two financing models is also different on financial stability. According to studies, banks with higher asset allocations to traditional lending typically have lower correlations with comprehensive income, which reduces the stability of the system (Zedda et al. 2020). Research analyzed the application of Blockchains in three FinTech segments: payments, deposits and loans, and investment management (Renduchintala et al. 2022). This indicates that peer-to-peer lending may have different implications for overall financial stability. This difference could be due to factors such as portfolio diversification, risk spreading, and different market dynamics between the two financing models.

RQ₂: How does the peer-to-peer lending transaction model reduce transaction costs and increase the speed of the lending process compared to the traditional lending model?

Recent studies have revealed a number of interesting findings regarding the potential of P2P lending transaction models in improving the efficiency and accessibility of the lending system (Table 2). One of the studies conducted by He et al. (2018) found that Blockchains-based incentive mechanisms can significantly increase the participation of nodes in the P2P lending system, reaching an increase of up to 65%, as well as increasing system efficiency by 55% compared to conventional schemes. The process of finding funds and channeling funds in p2p lending is faster than through conventional channels because it does not involve intermediaries

([Antipova 2020a](#)). Loan approval decisions in p2p lending can be known in just hours or days, in contrast to the bank loan approval process which takes days to weeks ([Pompella & Matoušek 2021](#)). This mechanism utilizes crypto token payments and Block chain technology to record and validate transactions, thus attracting more participants to engage in the P2P lending system.

In addition, other research conducted by [Zhong & Jiang \(2021\)](#) shows that internet finance, including P2P lending systems, can decrease the exclusivity of traditional finance as well as the asymmetry of loan and investment exclusion rates in traditional financial markets. This finding indicates that the P2P lending model is able to reach segments of society that were previously difficult to access by conventional financial institutions, thereby increasing financial inclusion.

Furthermore, smart contracts on the Blockchains are proven to guarantee reliable transactions between separate users in P2P energy trading platforms, as described by [Kwak & Lee \(2021\)](#). This smart contract technology enables the creation of a secure and trusted energy exchange mechanism without the need for intermediaries. In addition, the Themis technology developed by [He et al. \(2018\)](#) has also been proven to support low-cost PB-scale data storage suitable for practical implementation in P2P lending. With efficient data storage capabilities and affordable costs, P2P lending systems can provide more affordable services for borrowers and lenders.

Recent research has highlighted several important aspects of P2P lending and its impact on the financial landscape. Experimental results show that Themis is capable of supporting PB-level data storage at low cost, making it feasible for practical implementation ([Hei et al. 2021](#)). Furthermore, a study from [Nguyen et al. \(2022\)](#) examines the connection between interest rates and a

number of variables, including credit score, industry, stage of business, purpose of loan, and length of loan. The results show that interest rates vary for loans with the same purpose and credit rating, and that there is a significant correlation between interest rates and loan term.

However, both crowdfunding and P2P lending come with inherent risks, including limited liquidity, fraud, equity dilution, and loan defaults ([Rabbani et al. 2022](#)). On the predictive front, research by [Liu et al. \(2024\)](#) indicates that prediction results significantly improve the default customer recall rate and AUC index, showcasing the effectiveness of advanced algorithms. [Rjoub et al. \(2023\)](#) further demonstrate that these algorithms can outperform conventional methods with 91% precision, 90% confidentiality, 96% robotics, and 25% effectiveness in mitigating cyber risks.

In fact, the real-time Blockchains token payment system proposed by [Ko et al. \(2023\)](#) can facilitate secure and easy-to-use P2P transactions. Block chain technology enables faster and more transparent transaction verification and validation processes, thereby increasing speed and trust in the process of borrowing and lending through P2P platforms

RQ3: Can decentralized finance (DeFi) models in peer-to-peer lending improve transparency, safety, and consumer protection compared to traditional lending models?

Decentralized finance (DeFi) is an innovative financial model based on Block chain technology, which eliminates the role of traditional financial institutions in various financial services, including peer-to-peer lending (Table 3). Based on the information presented in the table, the DeFi model in peer-to-peer lending can improve transparency, security, and consumer protection compared to traditional lending models

Table 2. Paper based on the transaction model in peer-to-peer lending in reducing costs compared to traditional models

Title	Main Findings
(He et al. 2018)	To incentivize node involvement in peer-to-peer (P2P) networks, a novel Block chain-based incentive mechanism is put forth that uses Block chain technology to record and confirm transactions together with crypto currency token payouts. When compared to conventional schemes, this method can boost system efficiency by up to 55% and node participation by up to 65%.
(Antipova 2020b)	When using peer-to-peer financing, funding can be found and channeled more quickly than with traditional
(Pompella & Matoušek 2021)	In contrast to bank loan approval decisions, which might take days or weeks, P2P loan approval decisions are known within hours or days.
(Zhong & Jiang 2021)	This research presents empirical evidence suggesting that internet finance may lessen the exclusive character of traditional finance by reducing the asymmetry of loan exclusion rates and investment rates in traditional financial markets.
(Kwak & Lee 2021)	The platform simulates real energy trading between sellers and buyers using a hardware testbed and web interface. The platform can guarantee reliable energy transactions between separate users by using smart contracts on the Block chain.
(Hei et al. 2021)	Experimental results show that Themis is capable of supporting PB-level data storage at low cost and is feasible for practical implementation.
(Nguyen et al. 2022)	This study looks at the relationship between interest rates and other factors such credit score, industry, business stage, loan purpose, and loan duration. The findings indicate that there are variations in interest rates for loans with identical credit ratings and purposes, and that interest rates and loan duration are related.
(Rabbani et al. 2022)	Both crowdfunding and P2P lending have risks such as limited liquidity, fraud, equity dilution, and loan defaults.
(Liu et al. 2023)	Prediction results significantly improve the default customer recall rate and AUC index.
(Rjoub et al. 2023)	The algorithm is able to achieve 91% precision, 90% confidentiality, 96% robotics, and 25% effectiveness in mitigating cyber risks. This approach is better than traditional approaches
(Ko et al. 2023)	Integrating key management, token management, token payment, DDoS protection, and real-name authentication modules makes a peer-to-peer real-time Blockchain token payment system secure and user-friendly.

Table 3. Paper based decentralized model paper (defi) can increase transparency, security and consumer protection compared to traditional models

Title	Main Findings
(Fukumitsu et al. 2017)	Propose a secure P2P-based online storage scheme without a central server. User data will be divided into several parts using the secret sharing method and spread across the various P2P nodes randomly. Malicious nodes can be detected and avoided based on joint monitoring between nodes and majority decision.
(Yu et al. 2018)	Describe the trust model and consensus and incentive mechanisms in P2P and Block chain. Proof-of-work, proof-of-stake, delegated proof-of-stake, PBFT, and zero-knowledge proof are some examples of Block chain consensus processes.
(Yue et al. 2018)	Data integrity verification methodology for peer-to-peer cloud storage based on block chain simulation results show this framework can improve data integrity verification performance.
(Pradhan et al. 2018)	This research proposes a Block chain-based security framework for peer-to-peer file sharing systems to prevent various attacks such as collaborative attacks.
(Gattermayer & Tvrđik 2017)	The system records and channels "kudos" or positive feedback between nodes to identify problematic nodes. The system was evaluated through experiments with malicious nodes in the Clondike cluster and was able to affect the reputation of malicious nodes.
(Li et al. 2018)	Analyzed the network performance and security of a new Blockchains-based architecture for distributed cloud storage. The results show that this architecture is more secure (file loss rate close to 0%) and faster (transmission time reduction up to 76.47%) than conventional cloud architecture.
(Kim & Hong 2016)	Design a rule-based data protection system using Block chain technology for secure peer-to-peer distributed networks. Designing system architecture, role-based authentication and access mechanisms, and simulating system prototypes to secure data sharing on Block chain
(Gonzalez 2021)	Central bank-backed stable digital currency potentially considered reliable collateral
(Mosteanu & Faccia 2021)	Overall, the document argues that the interaction between fintech and advances in fields such as quantum computing, fractals, and distributed ledger Blockchains has the potential to drive significant paradigm shifts and open innovation in the financial industry.
(Sarros et al. 2021)	This research examines a Proof-of-Prestige reward system that uses Blockchains-based decentralized reputation to incentivize honest users in P2P networks.

Title	Main Findings
(Munsarif et al. 2022)	The research examines credit risk analysis in peer-to-peer lending by using embedded and stacked ensemble learning techniques to select important features and predict credit risk.
(Munsarif et al. 2022)	This method improved the prediction accuracy compared to the initial model without feature selection. RF meta-learner and stacking ensemble are the best classification models.
(U et al. 2022)	The results show that initial trust and perceived risk have a significant effect on borrower interest, while convenience of use and perceived security have no effect.
(Taherdoost 2023)	This article discusses how Block chain technology can support a revolution in digital finance (Fintech) industry in the future. Block chain technology can improve efficiency, security, and user experience in the banking sector
(Dömötör et al. 2023)	This study analyzes peer-to-peer lending investment performance by looking at portfolio and cash flow data from the Bondora platform. The results show Since over 40% of transactions result in a negative internal rate of return (IRR) and that the average IRR for investments is negative, resulting in investment losses. This suggests investors bear credit risk without compensation
(Galea-Pace 2021)	Block chain technology can improve security, transparency, cost reduction, collaboration, risk control, quick settlement, and auditing in financial services. This research also discusses the application of Block chain technology in various financial services such as payment systems, lending, investment, and financial history.
(Liu et al. 2024)	The study uses peer-to-peer lending data from the Bondora platform to analyze the relationship between network centrality and credit risk.
(Calabrese et al. 2019)	The model shows the dependency between defaults on peer-to-peer lending and buro credit.
(Buck et al. 2021)	The new trust measure developed in this study has a significant positive relationship with the size of loans received by community bank members.
(Callı & Coşkun 2021)	The study also found a paradigm shift in the way that new techniques and alternative data sources are applied for credit risk assessment.
(Mhlanga 2021)	This study discovered that the use of alternative data sources, such public data, to address the issues of information asymmetry, adverse selection, and moral hazard had a significant influence on credit risk assessment.
(Bitetto et al. 2023)	This study investigates traditional parametric and non-parametric machine learning-based techniques to predict the Italian small- and medium-sized business credit risk. The outcomes demonstrate that the conventional Ordered Probit Model is outperformed by the Historical Random Forest technique.
(Junarsin et al. 2023)	This study shows that the expansion of fintech financing does not increase bank risk-taking. Fintech financing even pushes banks to operate more productively in order to raise the caliber of their credit.

Title	Main Findings
(La Torre et al. 2024)	The results show that Italian banks are not yet fully compliant with Article 111 bis, however, positive trends in particular in sustainable financing can be observed

Based on studies carried out by [Fukumitsu et al. \(2017\)](#), in the P2P-based DeFi model, user data is divided into several parts and spread across various P2P nodes randomly. This can improve security because malicious nodes cannot be easily detected and avoided based on joint monitoring between nodes and majority decision-making. Thus, the DeFi model can protect users' personal data more effectively than the traditional centralized lending model.

Furthermore, research conducted by [Yu et al. \(2018\)](#) explained that the DeFi model has consensus mechanisms and incentives on P2P and Blockchains platforms. Consensus techniques for Block chain such delegated proof-of-stake, proof-of-work, and proof-of-stake, can significantly increase the transparency and security of financial transactions compared to traditional lending models that generally rely on financial institutions as third parties to verify and record transactions.

Based on the explanation [Fukumitsu et al. \(2017\)](#) In the DeFi model, user data spread across the various P2P nodes in a randomized manner can prevent malicious nodes from attempting to manipulate or access the data, thereby improving system security. Meanwhile, the traditional lending model centralized in financial institutions is vulnerable to cyber-attack and the risk of user personal data leakage. Thus, the DeFi model in peer-to-peer lending can improve transparency, security, and consumer protection through the sharing of user data spread across various nodes, as well as a better and distributed Block chain consensus mechanism than the traditional centralized lending model.

CONCLUSION

This article presents a systematic review comparing peer-to-peer (P2P) lending

systems with traditional loan models. The findings indicate that P2P lending offers easier and faster access to financing, particularly for individuals and small businesses, thanks to the use of digital technology and Block chain. Additionally, P2P lending can reduce transaction costs and expedite the borrowing process. However, challenges related to immature financial regulations and evolving cyber security risks must be addressed to support broader adoption in the financial services industry.

The research's conclusions offer significant perspectives for stakeholders and decision-makers in the financial sector, especially in formulating policies that support the development of P2P lending. By understanding the advantages and challenges of this model, financial institutions can adapt and leverage new technologies to enhance accessibility and financial inclusion.

However, this study also has limitations, including a time constraint that focuses only on studies published between 2015 and 2024, as well as a limitation in sources based on 61 selected articles, which may not encompass the entire available literature. Additionally, geographic variation is a concern given the differences in regulations and financial infrastructure across countries.

Future research on peer-to-peer (P2P) lending could focus on the impact of improved regulations on P2P growth, strategies for mitigating cybersecurity risks, and its effects on financial inclusion. Additionally, comparing P2P with alternative financing models like crowdfunding and decentralized finance (DeFi), as well as exploring the application of technologies such as artificial intelligence (AI) to enhance the lending process, would be valuable. Analyzing the macroeconomic impact of P2P

lending could also provide valuable insights into the future potential of this model.

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