



P2P Crowdfunding: An Alternative Source of Credit for Enhancing the Financial Inclusion of Small Holder Farmers

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2023/v41i81984

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/100778>

Opinion Article

Received: 25/03/2023

Accepted: 28/05/2023

Published: 03/06/2023

ABSTRACT

Background: Indian agriculture is considered as a major source of livelihood generation for more than 58 percent of rural households. Credit is a pivotal element both in agricultural production and marketing system. Presently, most of the marginal and small farmers solely depend on localized lending models viz., village money-lenders who lend money to farmers for short term. The ministry

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of agriculture estimates that to double farmers' income, private investment in agriculture must increase to two-fold. P2P crowdfunding is gaining grip at a very fast pace and gradually becoming an attractive investment option for investors.

Methods: This paper attempts to explore different aspects of P2P crowdfunding and its scope as an alternate source of credit for the small and marginal farmers. Based on secondary data analysis (2014-2022) from a number of research papers, RBI notifications, blogs and newspaper articles.

Results: It is evident that the global peer to peer (P2P) lending market size was valued at \$67.93 billion in 2019, and is projected to reach \$558.91 billion by 2027, growing at a CAGR of 29.7% from 2020 to 2027. This type of funding option has tremendous potential to magnify agriculture capital markets by allowing agricultural firms to build value more efficiently and involve more people directly in food production. The paper distinguishes the advantages of P2P lending over traditional credit system and private lending that are predominant in agriculture. However, P2P lending has its own limitations that is also discussed. Additionally, companies as well as investors need to analyse crowdfunding options carefully as per its economic feasibility and structure so that it will lead to mutually beneficial investment relationships.

Keywords: P2P crowdfunding; agricultural credit; investment.

1. INTRODUCTION

The world population has reached 7.7 billion and is expected to increase by another 2.2 billion by 2050. This means that the World should be prepared to feed 10 billion people by 2050 (Ranganathan et al. 2018). This could be achieved only by boosting the yield per acre drastically. India, which ranks second worldwide in farm outputs has major challenges to face in the food production system, especially with respect to climate volatility, massive urbanization and poor capital infrastructure in agriculture [1]. The expansion in improvised agricultural inputs is highly important for improving the agricultural productivity in India [2]. One of the major challenges in Indian agriculture is lack of investment [3]. The major reason behind this is land fragmentation and leased-in agriculture that drive away farmers from capital investments [4]. Agriculture is considered as a major source of livelihood for more than 58 percent of rural households who absolutely have no profitable ideas [5]. There is an emerging need for appropriate agricultural credit as majority of the Indian farmers are small and marginal [6]. The ministry of agriculture estimates that to double farmer income, private investment in agriculture must increase to two-fold [7]. Private investments here refer to investments made by farmers themselves, inclusive of their own savings and borrowings from institutional and non-institutional sources. This opens up another challenge as most bank and other institutional credits consider agriculture sector under high credit risk [37]. The climate change, seasonal production pattern, perishable products, fluctuation of market prices add to the financial

risks [8]. Thus, majority of the small farmers are pushed outside the formal agricultural credit system. Credit is a critical element both in agricultural production and marketing [9]. To meet this, most of the marginal and small holding farmers, depend on localized lending models that are predominant in Indian villages such as village money-lenders who lend money to farmers for short term [10]. Often, these village money lenders are expensive with interest rate ranging between 3 to 5 percent per month which accounts for 36 to 60 percent annually. Such high rates reflect high level of inherent risk for the farmers [11]. However, the reality is that village-level lending has a number of advantages over formal lending i.e., the easy access to lenders; lender's insight of farmer's credit worthiness; no KYC requirements and less or no paperwork.

P2P (Peer-to-Peer) crowd-funding is a financial innovation that connects borrowers with the lenders. It is used to raise loans that can be paid back with interest [12]. For its imbibed nature, it's also called social investing and/or direct consumer lending or even crowd lending [13]. P2P crowdfunding is already a successful model for alternate financing across the globe. In India, P2P crowdfunding is gaining traction at a very fast pace and slowly becoming a very attractive investment option for investors. Since last few years the world economy has plummeted due to the pandemic COVID-19 which has opened up tremendous scope and opportunities in terms of market growth and the return on investment through P2P lending as it provides a 12-14 percent return on average [14]. RBI has already taken a cognizance of this innovation and come up with regulations for the sector. The P2P

platforms are seen in huge number in USA, UK and China. Zopa, a British financial company is the world's first peer-to-peer lending company started in the year 2005 [15]. UK is a leading nation in crowdfunding. In India, P2P lending platforms are regarded as NBFCs (Non-Banking Financial Companies) and are governed by RBI regulations to protect the interests of both borrowers and lenders. The top listed P2P platforms in India are Lendbox, Faircent, Lendingkart, Finzy, i2iFunding, i-Lend, Len DenClub, PaisaDukan etc [14]. Faircent is India's First RBI registered Peer to Peer Lending platform [16]. This paper attempts to explore different aspects of P2P crowdfunding and as to whether it could emerge as an alternate source of credit for enhancing the financial inclusion of small holder farmers. The purpose of this paper is to show the importance of P2P crowdfunding over private money lending system and traditional credit system. It is presented on the hypothesis that P2P crowdfunding can improve the financial inclusion of farmers and their access to quicker loans.

2. METHODOLOGY

The paper describes in detail the agricultural credit system in India through a systematic review process and attempts to highlight the importance of P2P crowdfunding in Agriculture. The challenges of P2P crowdfunding and its possible application in agriculture has also been presented. It is based on secondary data analysis with information from a number of research papers, RBI notifications, blogs and newspaper articles. This paper clearly presents the problems in the agriculture credit system. The paper also presents the problems that may arise from P2P Lending industry. In order to study the application of P2P lending in agriculture various search strategies were designed with strings "P2P lending", "P2P crowdfunding" and "Peer to Peer Lending". The search focused on the source and period of publication. The Publication search was focussed to the period 2014 to 2022. Some important papers dating before 2014 are also included. The inclusions and exclusions from these literatures were developed based on research purpose and it was ensured that the results were reliable. Articles contain P2P Lending keywords, articles including full text papers, and published years (2014-2022). Because Peer to Peer lending research is a multidisciplinary study, this research is not limited to the online credit system

but to the nature of transactions and ease in the credit lending system.

3. RESULTS AND DISCUSSION

The Agricultural Credit Reach: The sources of agricultural credit in India is broadly classified into institutional and non-institutional sources (Kulshreshta, n.d.). Institutional sources include rural co-operatives, Scheduled Commercial Banks (SCBs), Regional Rural Banks (RRBs), NABARD, Non-Banking Financial Institutions (NBFI), Microfinance Institutions (MFIs) and Small Finance Banks (SFBs) (Fig. 1). Non-Institutional sources include moneylenders; traders and commission agents; relatives and landlords [17]. NABARD's All India Rural Financial Inclusion Survey (NAFIS) 2017 reveals that only 43.5 percent of agricultural households accessed agricultural loan during the year 2015-16 [18]. Interestingly, of these 43.5 percent, 60.5 percent of the loan was sourced from institutional sources and 30.3 percent sourced from non-institutional sources [19]. The data from the National Sample Survey Office [20] reveals that marginal farmers (with a holding size of less than 1 ha) that constitute about 68.5 percent of operational holdings received roughly 49 percent of their total loans outstanding from institutional sources and 51 percent from Non-institutional sources, whereas large-scale farmers (above the holding size of 10 ha) who account for only 0.6 percent of operational landholding had 79 percent of their loans coming from institutional sources. This data clearly indicates that institutional credits are large-farmer friendly while marginal farmers share major portions of agricultural credit from non-institutional sources. Incidentally, post 2009-10, the non-performing assets (NPAs) in agriculture affiliated to scheduled commercial banks has risen sharply from Rs. 71.5 billion to Rs. 832 billion between 2009 and 2018 in absolute terms [19]. This massive rise in NPAs is often attributed to 'moral hazard' in the repayment behaviour of farmers, which has undermined the whole institutional credit system for agriculture making the agricultural loans credit risky.

P2P Crowdfunding: P2P crowdfunding is relatively a recent phenomenon. P2P (Peer-to-Peer) crowdfunding are the lending platforms which operate as Non-Banking Financial Company (NBFC) under the RBI guidelines that facilitate loans to willing lenders and borrowers through online platforms. As per agriculture credit classification, it can be

classified under the institutional credit sources. The banks, institutional credit investors, private firms and individuals are allowed to participate and invest on these lending platforms [21]. These lending platforms are speedy and cut most operational costs. In P2P platforms, lenders make offers to fund borrower's requirement. Lenders can fund a portion of the total loan

requirement of multiple borrowers and borrowers can seek to raise money from multiple lenders. Once an agreement is reached between the borrower and the lender, a formal contract is signed by them. The loan amount is then transferred to the borrower's account and the borrower makes periodic repayments via EMI over the stipulated time period.

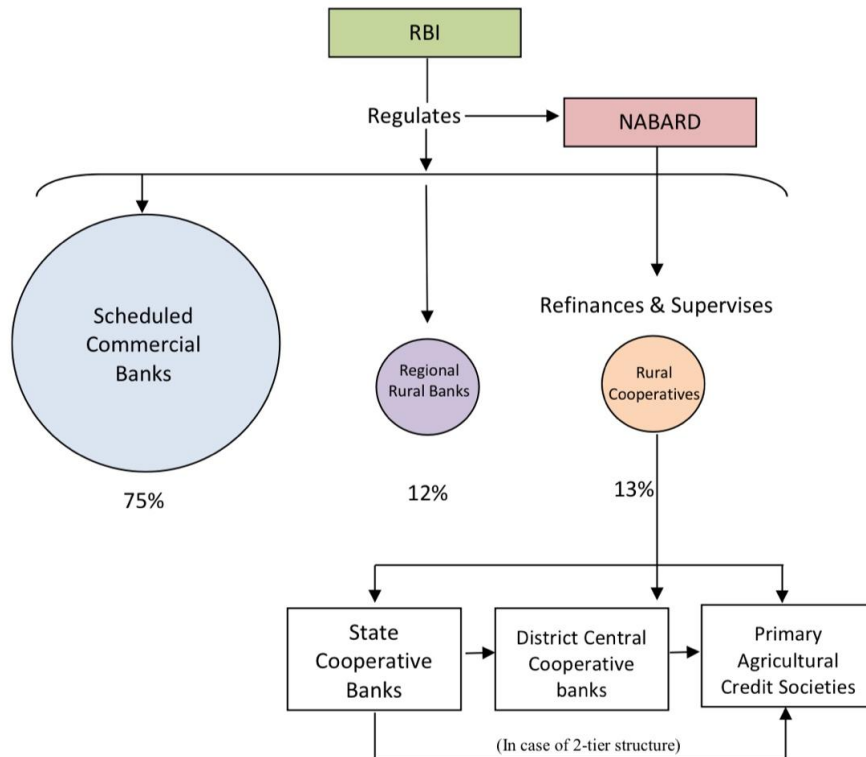


Fig. 1. The 2-tier structure of the institutional agricultural credit system in India

Source: Agricultural Credit System in India [19]

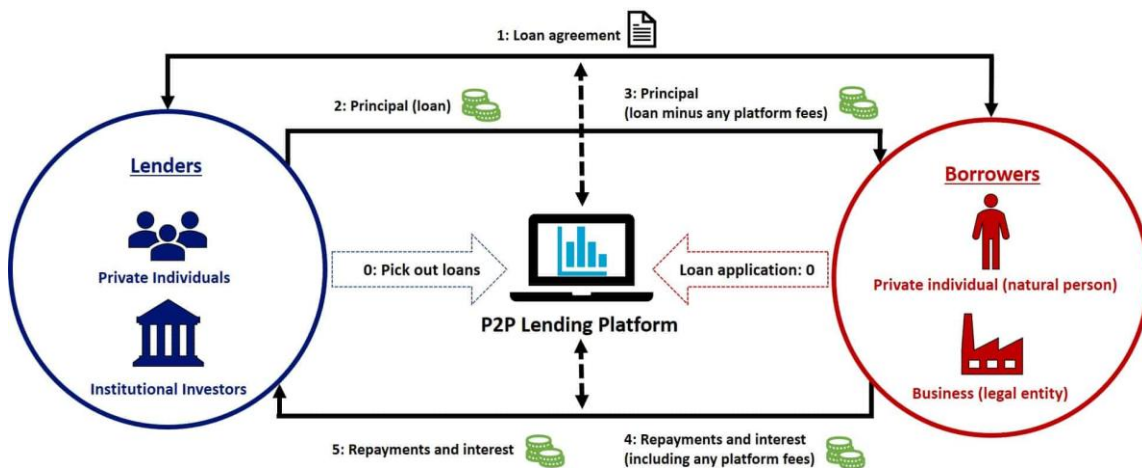


Fig. 2. The P2P crowdfunding process

Source: P2P Lending Model [22]

Social Impacts of P2P Crowdfunding: The way Indian Government is shifting towards cashless economy; the recent policies are encouraging innovation in financial products through adoption of technology. Len Den Club, one of the leading P2P platforms in India reports that over 50% of women aged between 21 to 30 had borrowed

loans through their platform, indicating that women from Gen-Z and millennial cohort, who are also more acquainted with technology, are comfortable taking digital loans. Also, women were more particular about repayment of their loans, resulting in LenDenClub experiencing only 3.37% delayed loans by women [23]. With rising

Table 1. Difference between traditional bank loan, P2P lending and private money lenders

Category	Traditional bank loan/ crop loan	P2P crowdfunding	Private money lenders
Cost of loan	Are comparatively cheaper when offered a subsidized loan. Non-subsidized loans attract higher interest rates although cheaper.	Provides a better interest rate which may be a little higher than traditional crop loan but are very cheaper compared to private lenders.	Are known to charge exorbitant interest rates.
Process	Very rigid, cumbersome and time consuming	Online process is quick and accessible	Very quick and easily accessible
Type of model	One-to-many. The Pooled depositor's money is sanctioned to many borrowers	Many-to-many. Each borrower is funded from several lenders and Each lender can lend several borrowers	One-to-one.
Control	Depositors and Borrowers are no way connected. Bank rules are final.	Lenders and Borrowers are completely aware of each other and arrive at a mutual agreement	Controlled by money lenders
Credit-worthiness assessment	Uses traditional and explicit financial tools	Uses Big Data Analytics to assess the economic, personal and social factors	Is aware of family and farm status or uses a middleman as guarantee
Benefit for an Investor/ Depositor	Low returns with no risk	High returns based on risk class opted	High returns and high risk
Benefits for a borrower	Affordable lower rates	Lower to moderate rates	Very high rates
Flexibility of repayment	Less flexible	More flexible as payments can be made for pre-closure and even avail short-term loans ranging in days to months.	May charge exorbitant charges for late payments.
Loan decision	Made by bank	Made by lender	Made by lender
Monitoring of borrowers after sanction	Made by bank	Made by P2P platforms	Made by lender
Centralization of risk	Centralized on bank	Decentralized on different lenders	Centralized to a lender
Collateral requirement	Is a must	Flexible. Lack of collateral will not hinder the loan process	Informal collateral agreement may be done

Source: Developed by gathering information from web sources and research papers

education and awareness levels of financial products, an increasing number of women have appeared to take their own financial decisions [23]. This is one of the major impacts of P2P crowdfunding. Similarly, most of the studies on women SHGs in India have reported prompt and timely repayment of loan instalments [24-26]. At the same time there are several gender-specific obstacles in agriculture which limits women's access to the institutional credits [27]. Therefore, P2P crowdfunding may encourage larger participation of farm women in accessing the farm loans. Faircent, a P2P platform has designed several women-oriented loan baskets targeting the credit-worthy women borrowers through their Social Impact Loans and Women Empowerment Loans [16].

The Key Prescriptions and Arguments for P2P crowdfunding in Agriculture: Acquiring lenders for different loan sectors is a challenging factor in P2P lending platform, which in turn, is influenced by trust in borrowers of that sector [28]. As trust is a critical determinant in P2P crowdfunding, lenders may not easily turn-up to finance agricultural projects, unless the farmers are able to convince the lenders about the viability of their project. With majority Indian youth aspiring to take up farming as a business, only having a clear objective, innovation and sustainability ideas will attract lenders. Historical data on previous loans is a key to predicting the performance of any sector loans [29]. As farm loans default is rising, it may take time to build a trust ecosystem between agriculture borrowers and lenders on P2P platforms. However, online P2P lending provides greater convenience and access to financial services, potentially under better terms [30]. This factor may swap the local village lending system into a formalized lending system in future. Also, P2P lending platforms may provide access to loans for borrowers who are otherwise unlikely to obtain them from traditional financial institutions [31]. Compared to banks, P2P lending has an upper-edge when it comes to the pace and ease of the process. As economic survey 2022 suggests investment as critical in agriculture [32], P2Ps may play a vital role in faster processing and quick loan approval.

How P2P funding could benefit farmers: As in 2018, 7.7 per cent of the total national suicides were classified as farmer suicides. In which, the debt was rated significantly higher than crop failures [33-35]. Major portion of these borrowings was from private money lenders with insane rates of interest. And, more than 70 per

cent of all indebted farmers were those who possess less than two hectares of land [32]. Even if the farmer received a good price for his produce, the amount left after spending on his necessities like food, children's education, healthcare etc. was not enough to meet the debt obligations of private money lenders. These moneylenders were also known to pressurize farmers to sell their produce at a price lower than the market price in the volatile market situations [32]. Though there is lending legislation enacted, which call for registration of money lenders and charging interest rate up to a certain level, most money lenders are not registered. Thus, P2P platforms may emerge as an alternative source of credit to farmers especially in contrast to the unorganised private money lending system [36,37].

Key Differences between traditional loans, P2P loans and Private money lending: The key differences between the traditional bank loans, P2P crowdfunding and Private village money lending is presented in detail in Table 1.

4. CONCLUSION

The global peer to peer (P2P) lending market size was valued at \$67.93 billion in 2019, and is projected to reach \$558.91 billion by 2027, growing at a CAGR of 29.7% from 2020 to 2027. P2P Crowdfunding is set to become an increasingly important element of agriculture sector finance. This type of funding option has the potential to expand agriculture capital markets, allow agricultural firms to build value more efficiently and involve people more directly in food production. At the same time, companies as well as investors need to analyse crowdfunding options carefully to make sure they make economic feasibility, are carefully structured and ideally lead to mutually beneficial investment relationships. P2P lending platform functions via internet-based services and may save a lot of time of the farmers who at present spend much time in commuting to various offices and banks. Digitization has been one of the most widely adopted strategies in financial services and may offer enhanced consumer services with clear insights. P2P lending platform has an innovative edge over traditional banking systems, owing to the fact that it offers higher transparency in businesses. Thus, such transparency would minimize the dependency of farmers on local money lenders who charge exorbitant interest rates.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. FAO. The future of food and agriculture – Trends and challenges. Rome; 2017.
2. Venkatesh P, Nithyashree ML. Institutional Changes in Delivery of Agricultural Inputs and Services to Farm Households in India. *Agricultural Economics Research Review*. 2014;27:85–92.
3. Chand R. Doubling Farmers' Income – Rationale, Strategy, Prospects and Action Plan. Report of National Institution for Transforming India (NITI) Aayog, Govt. of India, New Delhi; 2017.
4. Moahid M, Maharjan KL. Factors affecting farmers. Access to Formal and Informal Credit: Evidence from Rural Afghanistan. *Sustainability*. 2020;12:1268.
5. Sharma M. The Future of Indian Agriculture. Blog in 'Down To Earth'. 4th February 2021.2021; Accessed on 13th June 2022. Available:https://www.downtoearth.org.in/blog/agriculture/the-future-of-indian-agriculture-75384
6. Bisht IS, Rana JC, Ahlawat SP. The future of smallholder farming in India: Some Sustainability Considerations. *Sustainability*. 2020;12:3751.
7. Chand R. Transforming Agriculture for Challenges of 21st Century. Annual Conference Indian Economic Association (IEA). 2019;15(4):102.
8. Henning JIF, Bougard DA, Jordaan H, Matthews N. Factors Affecting Successful Agricultural Loan Applications: The Case of a South African Credit Provider. *Agriculture*. 2019; 9:243.
9. Katchova AL, Barry PJ. Credit risk models and agricultural lending. *American Journal of Agricultural Economics*. 2005;87:194–205.
10. Kumara A, Singh KM, Sinha S. Institutional credit to agriculture sector in India: Status, performance and determinants. *Agricultural Economics Research Review*. 2010;23:253–264.
11. Verma PA. We want to be the alternate banking system in rural areas: Paisa Dukan. *The Economic Times (E Paper)*; 2019. Online edition. Accessed 24th August 2021 Available:https://economictimes.indiatimes.com/wealth/p2p/we-want-to-be-the-alternate-banking-system-in-rural-areas-paisadukan/articleshow/68426273.cms?from=mdr
12. RBI. Review of Master Directions – Non Banking Financial Company – Peer to Peer Lending Platform (Reserve Bank) Directions. 2017; Accessed on 13th June 2022. Available:https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11764&Mode=0
13. Investopedia. Peer-to-Peer (p2p) Economy. Reviewed by Robert c. Kelly; Accessed on 13th June 2022; 2021. Available:https://www.investopedia.com/terms/p/peertopeer-p2p-economy.asp
14. Synlabs. Best Indian P2P Startups of 2022. 2022; Accessed on 13th June 2022. Available:https://synlabs.io/best-indian-p2p-startups-of-2022/?utm_source=rss&utm_medium=rss&utm_campaign=best-indian-p2p-startups-of-2022
15. Khatri P. An overview of the peer-to-peer lending industry of India. *International Journal of Business and Management Invention*. 2019;8(3):1-11.
16. Faircent. Celebrating Indian Women – Empowering Women Borrowers. Faircent.com accessed 24th August 2021. Available:https://www.faircent.com/empowerwomen/
17. ReddyA, Thandava K. Non-Institutional Credit To Agricultural Sector: A Case Study Of Prakasam District. *Journal of Emerging Technologies and Innovative Research*. 2021;8(7):g7-g16
18. NABARD. All India Rural Financial Inclusion Survey (NAFIS) 2016-17. Mumbai: National Bank for Agriculture and Rural Development (NABARD); 2018. Accessed on 13th June 2022. Available:https://www.nabard.org/auth/writereaddata/tender/1608180417NABARD-Repo-16_Web_P.pdf
19. Gulati A, Juneja R. Agricultural credit system in India: Evolution, effectiveness and innovations. ZEF Working Paper Series, No. 184, University of Bonn, Center for Development Research (ZEF), Bonn; 2019.
20. NSSO. Household Ownership and Operational Holdings in India. Report No. 571(70/18.1/1). National Sample Survey Office, Ministry of Statistics

- and Programme Implementation, Govt. of India; 2013.
21. Lenz R. 'Peer-to-peer lending – Opportunities and risks. *European Journal of Risk and Regulation*. 2016;7(4):688-700.
 22. Schmidt J.P2P Lending Explained: Business Models, Definitions & Statistics. Available: <https://p2pmarketdata.com/blog/p2p-lending-explained/>. 2020; Accessed on June 14, 2022
 23. Livemint. 430% rise in investments by millennial women in P2P lending: Study. 2019; Accessed on 12th July 2022. Available: <https://www.livemint.com/companies/news/430-rise-in-investments-by-millennial-women-in-p2p-lending-study-11646708288293.html>
 24. Parida PC, Sinha A. Performance and sustainability of self-help groups in India: A gender perspective. *Asian Development Review*. 2010;27-1(1): 80-103.
 25. Nair A. Sustainability of Microfinance Self Help Groups in India: Would Federating Help? World Bank Policy Research Working Paper 3516, February; 2005.
 26. Moyle TL, Dollard M, Biswas S. Personal and Economic Empowerment in Rural Indian Women A Self-help Group Approach. *International Journal of Rural Management*. 2006;2(2): 245-266.
 27. Kristjanson P, Bryan E, Bernier Q, Tyman J, Meinzen-Dick R, Kieran C, Ringler C, Jost C, Doss C. Addressing gender in agricultural research for development in the face of a changing climate: where are we and where should we be going? *International Journal of Agricultural Sustainability*. 2017;15(5):482-500.
 28. Chen D, Lai F, Lin Z. A trust model for online peer-to-peer lending: A lender's perspective. *Information Technology and Management*. 2014;15(4):239-254.
 29. Guo Y, Zhou W, Luo C, Liu C, Xiong H. Instance-based credit risk assessment for investment decisions in P2P lending. *European Journal of Operational Research*. 2016;249 (2):417-426.
 30. Bachmann A, Becker A, Buerckner D, Hilker M, Kock F, Lehmann M, Tiburtius P. Online peer-to-peer lending-a literature review. *Journal of Internet Banking and Commerce*. 2011;16(2):1-18.
 31. Bruton G, KhavulS, Siegel D, Wright M. New financial alternatives in seeding entrepreneurship: Microfinance, crowd-funding, and peer-to-peer innovations, *Entrepreneurship Theory and Practice*. 2015;39(1):9-26.
 32. TOI. Farmer Suicides in India. Published in Times of India September 26, 2020. Accessed 24th August; 2021. Available: <https://timesofindia.indiatimes.com/readersblog/findustry-insights/farmer-suicides-in-india-26499/>
 33. TOI. Agriculture sector needs private funds, crop diversification. Published in Times of India February 1, 2022. Accessed on 4th July 2022. Available: <https://timesofindia.indiatimes.com/business/india-business/agriculture-sector-needs-private-funds-crop-diversification/articleshow/89259542.cms>
 34. Kulshrestha. Agriculture Credit in India. Published by Jiwaji University, Gwalior. N.d. Accessed on 13th June 2022. Available: <http://www.jiwaji.edu/pdf/ecourse/law/Agriculture%20credit%20in%20india%20-%20Dr.%20Mamta%20Kulshrestha,%20SOS%20LAW.pdf>
 35. Ranganathan J, Waite R, Searchinger T, Hanson C. How to Sustainably Feed 10 Billion People by 2050, in 21 Charts. 2018; Accessed on 5th July 2022. Available: <https://www.wri.org/blog/2018/12/how-sustainably-feed-10-billion-people-2050-21-charts>
 36. RBI. Report of the Internal Working Group to Review Agricultural Credit – Reserve Bank of India. 2019; Accessed on 12th July 2022. Available: <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=942#LET>
 37. September MT. Credit Risk Management: Loans to High-Risk Agricultural Clients in Central South Africa. Master's Thesis, University of the Free State, Bloemfontein, South Africa; 2010.

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The peer review history for this paper can be accessed here:
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