CONSULTATIVE DOCUMENT

ON

PEER-TO-PEER LENDING AND CROWDFUNDING

Nepal Rastra Bank

Economic Research Department

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Foreword

Peer-to-Peer (P2P) lending is the emerging form of alternative source of financing that fosters the diversification of financial services innovatively. These web-based lending platforms facilitate individuals and small businesses to lend and borrow without relying on traditional financial institutions. P2P lending has attracted attention due to its potential benefits for both borrowers and lenders. Borrowers often find P2P lending attractive due to streamlined application processes, and easy and convenient access to credit for underserved populations. Lenders, on the other hand, are attracted by the potential for higher returns compared to traditional investment options, such as savings accounts or government bonds.

This concept note aims to elucidate P2P lending models, country practices, and examine the relevance and feasibility of P2P lending platforms in Nepal. I hope that this concept note will provide a basic foundation for Nepal's journey toward modern tools of finance, and help think about P2P lending in the Nepalese context. We look forward to getting feedback on this consultative document.

I would like to thank the study team of the Economic Research Department comprising Director Mr. Madhav Dangal, Acting Director Dr. Birendra Bahadur Budha, Deputy Directors Mr. Prahlad Giri and Dr. Guna Raj Bhatta, and Assistant Directors Mr. Prabhakar Jha and Mr. Rohan Byanjankar for their contribution to this concept note.

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Abbreviations

ADB	Asian Development Bank
ASIC	Australian Securities and Investments Commission
BFI	Bank and Financial Institution
CCAF	Cambridge Centre for Alternative Finance
FCA	Financial Conduct Authority
FMPP	Fractional Matchmaking P2P Plan
FSC	Financial Services Commission
IMF	International Monetary Fund
KYC	Know Your Customer
MSME	Micro, Small, and Medium Enterprises
NRB	Nepal Rastra Bank
OJK	Otoritas Jasa Keuangan
P2P	Peer-to-Peer
SEBI	Securities and Exchange Board of India
SEC	Securities and Exchange Commission
SME	Small and Medium Enterprises
UNCDF	United Nations Capital Development Fund
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific

Executive Summary

- Alternative sources of financing have been gaining momentum with the rapid emergence of financial technologies. These alternative sources of financing provide flexibility, faster access to funds, and a broader range of funding services. Among them, web-based lending platforms, also known as Peer-to-peer lending (P2P) have facilitated individuals and small businesses to lend and borrow without relying on traditional financial institutions. In this backdrop, this study aims to analyze the regulatory provisions and country practices related to P2P lending as well as the risks, effects, and preconditions associated with P2P lending. Moreover, this paper tries to explore the relevance and feasibility of P2P lending and crowdfunding platforms for Nepal.
- Diverse operational modalities of P2P lending and crowdfunding are in practice. Debt-based models and equity-based models are the most popular models. There are several sub-models within debt-based models, which include marketplace lending, balance sheet lending, and invoice lending, and equity-based models, which include equity-based crowdfunding, real estate crowdfunding, and profit sharing. Broadly, P2P platforms operate under debt-based models, while crowdfunding operates under equity-based models.
- The rise of fintech has brought innovations in P2P lending and crowdfunding. This has made regulators and financial institutions realize the necessity to reorient traditional financial intermediation. NRB's key policy provisions also focus to move toward a cashless society and adapting digital innovation and new technology in the financial ecosystem.
- Countries exhibit substantial departure regarding regulatory provisions in P2P lending. These disruptive financial services are still in their infancy, and regulatory bodies are still learning about them. Asian countries, including China, Malaysia, and Indonesia, have adopted a high degree of regulations, while European countries such as France, Germany, and Italy, have imposed banking regulations on these platforms. However, all the countries have a common consensus regarding the need for regulations on these emerging platforms. In most of the countries, central banks regulate these platforms followed by the Financial Services Commission.
- Existing literature elucidates the effects and risks associated with P2P lending and crowdfunding. Rural areas with sparse banking channels have experienced a surge in P2P lending, while city areas with competitive banking are unaffected. These platforms foster in countries that are more affected by financial crises, highly underserved populations, and

undercapitalized banks. Likewise, P2P platforms are riskier compared to banks as these platforms do not take credit risk on their balance sheet. P2P companies encourage riskier borrowers as they can charge higher transaction fees and interest rates.

- P2P platforms require the fulfillment of preconditions in order to function effectively. Credit scoring, credit histories, asset ownership, current debts, the debt servicing to income ratio, employment information, and the number of bank accounts are all essential requirements for the efficient functioning of P2P platforms. These details allow for a more accurate assessment of the borrowers' credibility and contribute to the risk reduction process. Literature suggests that the inability to fulfill these preconditions before adopting P2P lending poses a risk of asymmetric information and adverse selection. The operations of P2P platforms without meeting these preconditions may pose incorrigible risks to the entire financial system.
- The P2P platform is likely to play a pivotal role in expanding financial inclusion in Nepal. The rural areas and MSMEs with poor access to financial services from the banks and financial institutions (BFIs) can have access to easy credit. However, developing financial infrastructure coupled with the limited availability of disaggregated financial and personal information of individuals may jeopardize P2P platforms. Consequently, those borrowers considered unfit for loan disbursement by traditional BFIs are likely to enjoy easy access to credit from these platforms ultimately posing a threat to investors. Thus, right regulations and development of financial infrastructure to set conditions for P2P lending are necessary to avoid adverse impact.
- The debt-based model can be one of the suitable models for Nepal. The Fractional Matchmaking P2P Plan (FMPP) may be a suitable debt-based model because it minimizes investor risk by diversifying the fund to the smallest extent possible. The financing provided by peer-to-peer platforms must be allocated to the productive sector. Peer-to-peer (P2P) platforms are expected to focus on startups and micro, small, and medium-scale enterprises (MSMEs) as their primary target communities.
- Though this concept paper tries to explore some basics of P2P lending in the context of Nepal, there needs a rigorous study before implementing the P2P and crowdfunding lending platforms. These types of studies require to address the issues related to the state of technology, availability of information in the financial system, and legal framework in Nepal.

Chapter I: Introduction

Background

1.1 The rapid emergence of financial technologies has brought many innovative financial products to the financial market. Some have been considered a catalyst for the development of entrepreneurship, especially in the small and medium enterprises (SMEs) sector. Over the years, alternative finance has been gaining momentum. Alternative financing methods such as peer-to-peer (P2P) lending, crowdfunding, revenue-based financing, and invoice financing have become popular in recent years. These alternative financing options offer flexibility, faster access to funds, and a broader range of funding sources. The development and adoption of alternative sources of financing can immunize the economy from the adverse real effects of a financial crisis (Jha & Kumar, 2020). Alternative finance has emerged as a promising avenue for sourcing funds to fuel social and business needs. It typically leverages tech-based innovative solutions to bridge funding gaps and drive progress.

1.2 Peer-to-peer (P2P) lending is one of the recent and emerging forms of alternative finance for diversifying financial services in an innovative way. P2P lending has enabled individuals and small businesses to have access to financial resources without counting on traditional financial institutions (Tang, 2019). This platform matches lenders with borrowers, while curtailing the byzantine procedures demanded by preexisting financial intermediaries (Havrylchyk et al., 2016) and renders financial services to those unserved or underserved by traditional financial intermediaries.

1.3 P2P lending emerged in the early 2000s, with platforms like *Zopa* in the United Kingdom and *Prosper* in the United States pioneering the concept.[1] These platforms leveraged technology and data analytics to match lenders with borrowers and streamline the lending process. The global P2P lending market experienced significant growth over the years.

1.4 Similarly, another alternative finance model, the online crowdfunding approach, is used to raise money for projects online in the form of equity, debt, or donations from a large number of individuals. Lots of innovative start-ups have entrusted crowdfunding as the dependable funding route. In recent years, it has gained momentum where investors

[1] https://p2pplatforms.com/p2p-lending-history/

provide funding either directly to individual borrowers, known as marketplace lending, or the platform raises funds to invest through its balance sheet, called balance sheet lending (Rau, 2018).

1.5 Online crowdfunding has emerged as one of the most successful crowdfunding by the volume of capital raised (Lenz, 2016). The volume of online crowdfunding has therefore experienced rapid growth, such as it increased to United States Dollar (USD) 305 billion in 2018 from USD 0.5 billion in 2011 (CCAF, 2020; Rau, 2018). Online crowdfunding provides equal opportunity to all stakeholders regardless of their geographical settings and renders online open communication, which makes it one of the most popular choices among startups (Rau, 2018).

1.6 Several P2P lending and crowdfunding platforms are in practice. LendingClub and Prosper are two popular and dominant players in the P2P marketplace. These platforms have provided financial services to millions of borrowers by enabling them to access loans funded by individuals and institutional investors. Similarly, *Zopa* is widely recognized as a prominent peer-to-peer lending platform operating within the United Kingdom, facilitating the provision of loans and investment prospects. It is noteworthy that the specific workings of P2P lending platforms may vary across different platforms and countries.

1.7 This study has been conducted as per the provision outlined in the Monetary Policy 2022/23, to explore alternative forms of finance, such as peer-to-peer lending and crowdfunding, as potential means of alternative finance to enhance access to credit for start-up enterprises. Considering the innovation in lending in global financial markets, a comprehensive feasibility study is needed to properly identify the issues and challenges of the P2P lending platform and crowdfunding in the Nepalese market. This study explores whether the P2P lending and crowdfunding platform is feasible in Nepal, the factors to be considered for the lending platform and the role of the NRB. Specifically, this study tries to focus on the following research questions: (i) What are the different P2P lending models? (ii) How countries are regulating P2P platforms? (iii) Are P2P lending and crowdfunding platforms relevant and feasible in Nepal? And, (iv) What may be the appropriate operational modalities for P2P lending in Nepal?

Rationale of the Study

1.8 The rise of fintech has brought innovations in alternative finance, including P2P lending and crowdfunding. Therefore, both regulators and financial institutions have realized the necessity of reorienting traditional financial intermediation (Lenz, 2016). Furthermore, the rapid rise of P2P lending and crowdfunding may challenge traditional commercial banking.

1.9 Empirical evidence shows a concomitant rise in the regulatory challenges and risks, and P2P lending and crowdfunding. Several countries have formulated regulations to monitor and manage the emerging risks of P2P lending platforms. Asian countries such as South Korea, Malaysia, and Indonesia have passed regulatory frameworks for P2P framework with a clear mandate on the minimum capital requirement and borrowing limit for a single customer (CCAF, 2021; FSC/Korea, 2020; OJK/Indonesia, 2016; SC/Malaysia, 2023). In China, P2P lending witnessed rapid growth in the earlier phase (He & Li, 2021) however couldn't maintain its momentum and slowed down in recent years (CCAF, 2021).

1.10 Scholars such as Oh and Rosenkranz (2020) suggest promoting P2P lending in economies with a lower level of financial access. A feasibility study in economies like Nepal is the first and foremost step in the P2P domain to understand the role of P2P lending and crowdfunding practices, country experiences, issues, and the way forward.

1.11 The lending practices in Nepal are still traditional despite various advancements. Some prominent features include the dominance of collateral-based lending, burdensome paperwork, and multiple procedures. Especially, collateral-based lending practiced by formal financial institutions stands as an insuperable barrier that precludes the low-income/ poor population, and small and medium businesses from obtaining credit from these institutions (IFC & UNCDF, 2023). Hence, new channels, such as crowdfunding and P2P lending, could be highly suitable for addressing the requirements of MSMEs, nano-vendors, and even individuals who are constrained by collateral or fail to clear rigorous criteria stipulated by banks and financial institutions.

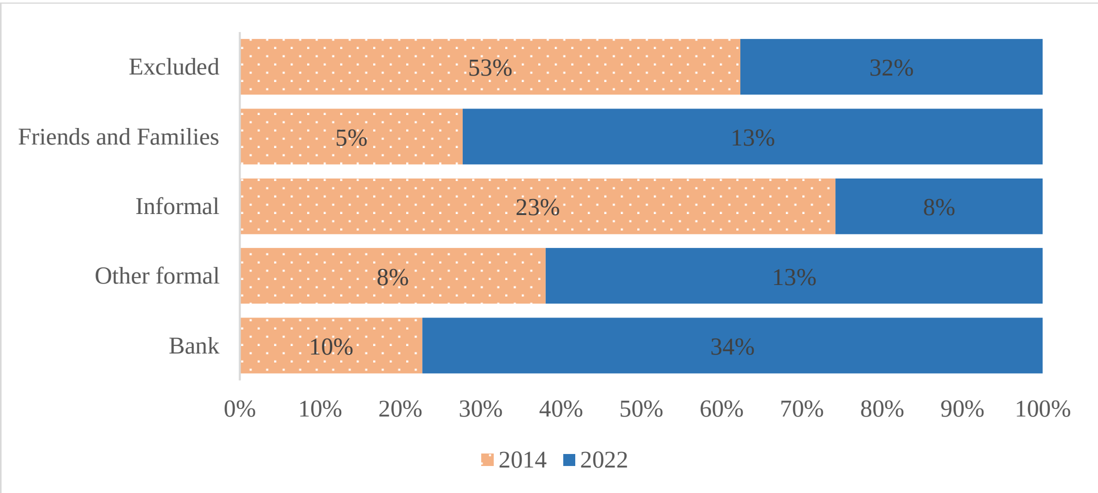
1.12 The World Bank defines the "missing middle" as the scope for shifting workers from small enterprises into medium-sized and larger ones. Considering the fact that larger corporations exhibit greater productivity as a result of economies of scale, this transition would consequently lead to an increase in productivity. Acknowledging these dimensions, there exist significant gaps in access to credit for missing middle. The lack of funding hinders the unrealized potential for the reallocation of labor across firms.

1.13 The financing gap for MSME in Nepal is estimated at USD 3.6 billion (ADB, 2018). The existing financial gap can be attributed to several factors, including asymmetric information, the existence of informal business practices, market heterogeneity, sluggish growth in productivity of MSMEs, the need for substantial skill and capacity enhancements at the entrepreneur's end, cost of underwriting surpassing the available margins, and existing regulatory constraints (IFC & UNCDF, 2023).

1.14 SMEs are suffering as a missing middle from formal financial institutions. FinTech is still in an embryonic stage in developing economies. However, the growing financial literacy deepened internet penetration, and the missing middle might propel the P2P lending platforms.

1.15 Though credit usage from formal channels has improved perceptively for MSMEs (self-employees), remittance receivers, irregular earners, and dependents compared to 2014, borrowing from friends and families has exhibited a non-negligible increase in 2022 compared to 2014 (UNCDF, 2023) (Figure 1.1). Relying on personal connections for funding lacks proper oversight due to regulatory gaps, increasing risks like loan defaults and fraud. Formalizing personal lending within peer networks and family circles is well-suited for safer lending practices.

Figure 1.1: Usage of credit



Source: IFC and UNCDF (2023)

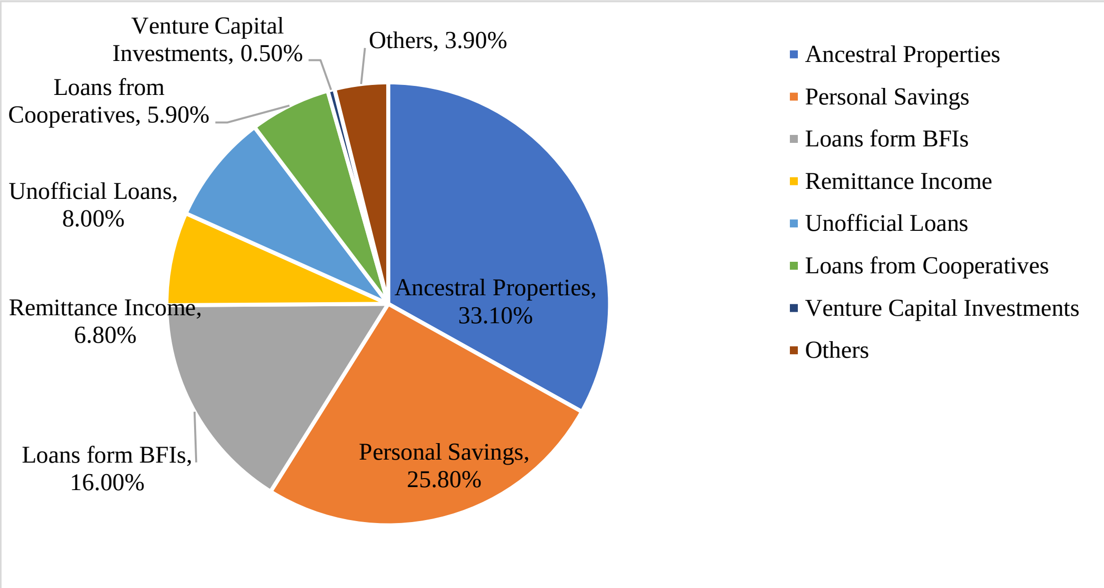
1.16 SME Financing Report 2019 estimates that approximately 59% of small enterprises in Nepal have loans amounting to less than NPR 2.5 million. This highlights a substantial funding gap for the "missing middle" segment, particularly for MSME start-ups. Existing constraints related to financial resources stand as one of the biggest obstacles to start, sustain and grow MSMEs (UNESCAP, 2020).

1.17 Only 16% of startup enterprises have access to capital from BFIs, and the major source of financing for startups was from their ancestral properties (33.1%) followed by personal savings (25.8%) (NRB, 2019) (Figure 1.2). As a result, opportunities are missed as individuals lacking ancestral assets or substantial savings face credit constraints. In such, peer-to-peer lending platforms could aid capital accumulation, fostering SME and startup growth.

1.18 The credit scoring for individuals and MSMEs – which would have facilitated non-collateralized credit facilities – is still in incipient stage (UNCDF, 2023). Lack of personal credit scores exclude a substantial collateral-lacking population to access credit thereby hindering economic progress. Introducing peer-to-peer lending can offer vital alternative credit access to such individuals.

1.19 Moreover, NRB's key policy provisions also orient toward a cashless society and adapting digital innovation in the financial ecosystem. The 4th Strategic Plan of NRB (2022-2026) has envisioned a digitalized financial ecosystem with promoted digital payments to drive innovation and competition. The focus of Monetary Policy (2022-23) is on increasing access to credit for small, cottage, micro, and medium enterprises and gradually reducing the over-concentration of credit. Hence, P2P platforms may help attain access to finance especially for tech-based startup companies as well as MSMEs.

Figure 1.2: Source of capital to finance for start-up SMEs



Source: NRB, SME Financing Study Report 2019

1.20 Making Access Possible (MAP) Nepal Initiative 2014 along with the Financial Inclusion Roadmap (2017-2022) identified access to affordable finance by 2030, where Nepal Financial Inclusion Plan (2017-2022) approved and issued by the NRB has put forward the rapid digital uptake in the financial services. Likewise, the Financial Sector Development Strategy developed and issued by the Government of Nepal also aims at aligning digital financial inclusion with rapid use of tech-based financial infrastructure wherever possible.

1.21 A baseline financial literacy survey conducted by the NRB aimed to assess the status of financial literacy and financial inclusion at the district and provincial levels. Credit product usage was observed in 46.34 percent of the adult population, with bank loans limited to 17.6 percent (NRB, 2022). Females find it harder to get loans from banks as compared to males, making it hard for female entrepreneurs to obtain credit for their businesses. As a result, high gender variation is evident in the context of a bank loan. Hence, the introduction of peer-to-peer lending can open avenues for females to the alternative sources of finance.

Objectives of the study

The core objectives of the study are as follows:

- To study the P2P lending models and country practices, and
- To observe the relevance and feasibility of P2P lending and crowdfunding platforms in Nepal.

Methodology

1.22 The study uses qualitative and descriptive approaches to meet the objectives of the study. The study mainly relies on a literature review, or observations to understand the perspectives and experiences of various stakeholders, including borrowers, lenders, platform operators, and regulators.

1.23 The study aims to explore how the P2P lending platforms are regulated in similar economies like Nepal, with a deeper understanding of the factors that influence the feasibility of P2P lending in Nepal, including cultural, economic, regulatory, and technological aspects.

Chapter II: Regulatory Provisions and Practices

Introducing P2P Lending and Crowdfunding

2.1 The P2P concept was instigated in 2005 but grabbed inexorable momentum in the aftermath of the Global Financial Crisis of 2008 (Oh & Rosenkranz, 2020). The P2P platforms gained popularity as an alternative source of financing as a response to an acute credit crunch in the traditional financial market, liquidity crunch, declining trade credits, and the unwillingness of financial institutions to lend to individuals and SMEs (Oh & Rosenkranz, 2020; Tang, 2019). Cornaggia et al. (2017), Tang (2019), and Oh and Rosenkranz (2020) conclude that P2P lending substantially performs well in an area with a lower level of financial access. Similarly, P2P lending service is also considered as social lending, crowd-lending, or debt-based crowdfunding (Oh & Rosenkranz, 2020).

2.2 P2P lending works as a web-based platform, and raises a small amount of funds from prospective lenders, either individuals or companies in a larger crowd, thereby distributing risks to a larger populace. The fund is then financed as a form of larger loan to SMEs or new business ventures. These web-based platforms serve as intermediaries themselves, facilitating transactions between peers. In the process, the platform spreads the risks to the crowds against traditional banking where the risk is concentrated in the individual bank. The P2P lending platform is responsible for assessing the risk associated with the borrowers by screening the borrowers' characteristics such as credit history, income, and so on.

2.3 P2P lending platforms enable exchanges through credit screening services, deferred interest rates (Franks et al., 2021; Wei & Lin, 2017), default prediction (Franks & Sussman, 2016), and formal and informal lending procedures (Allen et al., 2019). P2P lending offers flexibility by offering a more streamlined and accessible approach to extending loans, particularly for those individuals with less favorable credit histories or business owners in need of quick funding.

2.4 P2P platforms, by and large, deploy automated systems and sophisticated algorithms to evaluate the creditworthiness of applicants, determine loan conditions, and ascertain interest rates (Capital One, 2022)[2]. These platforms have evolved to streamline the

[2] https://www.capitalone.com/learn-grow/money-management/peer-to-peer-lending/

borrowing and lending processes, providing greater efficiency and accessibility. The typical process includes registration and profile creation, creditworthiness assessment, loan listings and opportunities, funding and disbursements, repayment, and returns.

2.5 P2P lending has attracted attention due to its potential benefits for both borrowers and lenders. Borrowers often prefer P2P lending due to friendly application processes and convenience in accessing credit for unmet demand from traditional financial intermediaries. Lenders, on the other hand, are lured by the prospect of higher returns compared to traditional investment alternatives, such as savings accounts or government bonds.

2.6 P2P lending has been instrumental in providing credit facilities to those individuals who are underserved or unserved by traditional financial intermediaries. P2P lending curtails the additional cost associated with financial intermediaries thereby benefiting investors by enabling them to capture rent (Siemionek-Ruskań & Fanea-Ivanovici, 2021). Studies suggest that P2P lending fervently emerges as an alternative financing in economies with a lower financial access point penetration. However, P2P platforms pose risks to lenders as the platform does not secure the funds of lenders as the bank does (Rau, 2018).

2.7 In crowdfunding, a large number of individuals collectively contribute funds to bring impactful projects to fill the funding gaps. Crowdfunding is a new method to raise funding for new ventures that empowers individual founders envisioning of commencing for-profit cultural or social projects to collect funding from a pool of individuals, often in return for future products or equity (Mollick, 2014).

2.8 Crowdfunding offers a unique way of raising funds for projects and businesses by collecting money from a large number of people through online platforms. It is particularly popular among startups and growing businesses seeking alternative financing options. By tapping into the online community, crowdfunding not only provides access to funds but also cultivates a supportive customer base and market insights.

2.9 Kirby and Worner (2014) divided crowdfunding into four categories: donation or social lending-based, reward-based, debt-based, and equity-based. Donation crowdfunding and reward crowdfunding are community crowdfunding (or non-investment crowdfunding), while debt-based and equity-based crowdfunding are financial return crowdfunding. Likewise, CCAF (2020) has refined this categorization by broadly categorizing crowdfunding into three major headings: debt-based models, equity-based models, and non-investment models. P2P lending is the debt-based version of crowdfunding.

Pricing Mechanism in P2P Lending

2.10 The creditworthiness of borrowers plays a crucial role in determining the interest rates offered to them in peer-to-peer (P2P) lending. The default rates are higher for those loans with substandard credit grades and longer maturity period (Emekter et al., 2015). Lenders adhering to risk-based pricing characterized by first-degree price discrimination where each borrower is charged different interest rate depending on their credit risk (Edelberg, 2006). Therefore, borrower creditworthiness influences P2P lending interest rates; higher risk grades and longer loan terms correlate with increased default rates. As such, risk-based pricing customizes interest rates for each person based on their credit risk, instead of using a one-size-fits-all rate.

2.11 Market demand and supply dynamics within the P2P lending marketplace can influence rates as well; higher demand and lower supply may lead to higher rates, while lower demand and higher supply can result in lower rates. The level of competition among lenders on the platform is another factor, as higher competition tends to drive rates down, while lower competition may lead to higher rates. The policies and fee structures set by each P2P lending platform also impact interest rates, including any fees charged to borrowers or lenders that affect the overall cost of the loan.

2.12 Dietrich and Wernli (2016) have examined the pricing mechanism of P2P lending in Switzerland using loan-specific, borrower-specific, and macroeconomic factors. In the loan-specific factor that the interest rates for loans are higher if the duration is longer, if the loan amount is larger, or if there are more loan auctions in the same period, and as a result, more opportunities for investors to participate in this alternative market. Borrower-specific factors in P2P loans impact interest rates negatively due to high risk of online lending.

2.13 Signals of trustworthiness, like economic status, significantly influence lenders' evaluation of credit risk. Higher debt-to-income ratios raise rates, while homeownership lowers them, reflecting rational lender behavior. Considering macroeconomic factors, higher general interest levels and unemployment rates result in higher loan rates. This suggests that small investors behave rationally, demanding higher rates when risk-free interest rates are elevated.

2.14 P2P lending platforms generate profit through various revenue streams. They charge borrowers origination and servicing fees, as well as listing fees for loan requests. Lenders may be subject to fees or commissions on their earned interest, and some platforms offer secondary markets with associated fees. Additional services like credit insurance or identity verification may also generate revenue.

Operational Modality

2.15 P2P lending can be broadly classified into three distinct operational modalities. The debt-based models, equity-based models, and non-investment models are in prominence. The debt-based models include marketplace lending, balance sheet lending, and invoice trading, equity-based models incorporate equity-based crowdfunding, real estate crowdfunding, and profit sharing, whereas reward-based crowdfunding and donation-based crowdfunding are non-investment-based models (CCAF, 2020). China dominates debt-based models, USA and Canada lead on equity-based models and non-investment-based models (CCAF, 2021).

Debt based models

2.16 Debt models, often linked to P2P/marketplace lending operations, encompass non-deposit-taking platforms that enable the online provision of credit to individuals, businesses and businesses, financed from individual or institutional investors (CCAF, 2020). This debt can manifest as a secured or unsecured borrowing, a bond, or a different kind of promissory note.

Table 2.1: Debt-based models

Category	Business model	Stakeholders
P2P/Marketplace lending	Consumer lending	Individuals and/or institutional funders provide a loan to a consumer borrower.
	Business lending	Individuals and/or institutional funders provide a loan to a business borrower.
	Property lending	Individuals and/or institutional funders provide a loan, secured against a property, to a consumer or business borrower.
Balance sheet lending	Consumer lending	The platform entity provides a loan directly to a consumer borrower.
	Business lending	The platform entity provides a loan directly to the business borrower.
	Property lending	The platform entity provides a loan, secured against a property, directly to a consumer or business borrower.
Invoice trading	Invoice trading	Individuals or institutional funders purchase invoices or receivables from a business at a discount.
Securities	Debt-based securities	Individuals or institutional funders purchase debt-based securities, typically a bond or debenture, at a fixed interest rate.
	Mini-bonds	Individuals or institutions purchase securities from companies in the form of an unsecured bond which is 'mini' because the issue size is much smaller than the minimum issue amount needed for a bond issued in institutional capital markets.

Source: CCAF (2020)

Equity-based model

2.17 Equity-based model focuses on individuals who invest money in a company in exchange for a small share of equity in that company. Equity models, including equity crowdfunding, correspond to activities where individuals or institutions purchase unlisted shares or securities of businesses, typically an SME (CCAF, 2020). Other stand of equity-based models, such as real estate and property-based crowdfunding, have flourished alongside the evolution of equity-based models (CCAF, 2020).

Table 2.2: Equity-based models

Category	Business model	Stakeholders
Investment-based	Equity-based crowdfunding	Individuals or institutional funders purchase equity issued by a company.
	Real estate crowdfunding	Individuals or institutional funders provide equity or subordinated debt financing for real estate.
	Profit sharing	Individuals or institutions purchase securities from a company, such as shares, and share in the profits or royalties of the business.

Source: CCAF (2020)

2.18 P2P consumer lending is the dominant alternative finance model that occupies about 31 percent share with a transaction volume of 34.7 billion in 2020 (Table 2.3). Likewise, the share of P2P consumer lending was about 59 percent with a transaction volume of 103.1 billion (Table 2.3).

Non-investment-based Model

2.19 Non-investment-based models incorporate rewards and donations. In these models, a fundraiser provides funding to a project, an individual, or a business without expecting a return on the investment. In reward-based crowdfunding, investors extend funds to individuals, projects, or companies and receive non-monetary rewards or products in return. On the other hand, donation-based crowdfunding involves donors supporting individuals, projects, or companies financially out of philanthropic or civic motivations, without any expectation of monetary or material returns.

Table 2.3: Volume and share of alternative finance models

Alternative Finance Model		2019 Volume (in billion $)	2019 Share (%)	2020 Volume (in billion $)	2020 Share (%)
Debt Models	P2P/Marketplace consumer lending	103.11	58.68	34.74	30.56
	P2P/Marketplace business lending	20.81	11.85	15.37	13.53
	Balance sheet business lending	19.82	11.28	28.02	24.65
	Balance sheet consumer lending	10.75	6.12	13.03	11.46
	P2P/Marketplace property lending	4.59	2.61	3.07	2.70
	Balance sheet property lending	4.04	2.30	1.81	1.59
	Invoice trading	3.72	2.11	3.88	3.42
Equity Models	Real estate crowdfunding	2.87	1.64	2.78	2.44
	Equity-based Crowdfunding	1.09	0.62	1.52	1.34
	Revenue/Profit sharing	0.04	0.02	0.08	0.07
Non-investment models	Donation-based crowdfunding	2.68	1.53	7.00	6.16
	Reward-based crowdfunding	0.90	0.51	1.25	1.10
	Other	1.30	0.74	1.11	0.98
Total		**175.71**	**100.00**	**113.67**	**100.00**

Source: CCAF (2021)

Regulatory Provisions

2.20 Regulatory provisions in P2P lending and crowdfunding are crucial for investor protection, financial stability, and market integrity. Prudent provisions ensure transparent disclosure, responsible lending, and risk management. By fostering a safe and trustworthy environment, they encourage participation from both investors and borrowers, promoting the growth of alternative finance.

2.21 Kirby and Worner (2014) provided the five different regulatory practices on P2P Lending, which are as follows:

a) Exempt market / Unregulated through lack of definition

Either the regulation in these jurisdictions designates P2P lending as an exempt market, or the legislation fails to provide a precise definition. However, there are instances where a regulation exists with the explicit purpose of safeguarding borrowers. This regulation primarily comprises pre-existing protocols intended to prevent deceptive advertising, unfair credit terms, and excessive interest rates.

b) Intermediary regulation

This governs intermediary P2P lending platforms. Registration as an intermediary is typically mandatory, with additional regulatory prerequisites contingent upon the jurisdiction in question. In general, certain regulations stipulate the registration requirements for platforms seeking market access. Additional regulations and prerequisites dictate the manner in which the platform ought to function, such as the licensing necessary to offer financial and/or credit services.

c) Banking regulation

P2P lending platforms are subject to regulatory oversight akin to that of banks, as they perform credit intermediation functions and are consequently regulated as such. Therefore, it is imperative for the platforms to acquire a banking license, adhere to disclosure obligations, and comply with various regulatory measures.

d) US model

There are two levels of regulation, federal regulation is implemented by the Securities and Exchange Commission (SEC), while state-level regulation requires platforms to submit applications on a state-by-state basis. State regulation is situated one level below the federal requirements. Certain states, such as Texas, have implemented complete prohibitions on the practice of peer-to-peer (P2P) lending. Certain states, such as California, introduced restrictions certain category of investors who are permitted to utilize lending platforms. Moreover, in the event that a platform intends to function in multiple states, it is imperative for the platform to submit separate applications to each individual state.

e) Prohibited or Highly Regulated

P2P lending is banned under the legislation, in certain circumstances. Countries including China, India, Indonesia, Vietnam, Malaysia, Thailand, South Korea, Singapore, Hong Kong, and Macau have the practice of P2P lending is outrightly banned or heavily regulated. This is due to concerns about the risks associated with P2P lending, such as fraud and predatory lending practices. In 2019, China's central Hunan province took a significant step by implementing a ban on all P2P lenders, which were infamous for fraud and defaults. Moreover, an investigation by authorities on 24 local P2P platform concluded non-compliance with regulations by all P2P platforms. In response to the severe irregularities, all P2P platforms were banned from conducting any new businesses, along with all other companies from other provinces that operate such business in Hunan Province.[3]

Table 2.4: Peer-to-peer lending regulatory practices in different countries

Regulatory Regime	**Countries**
Exempt market/Unregulated through lack of definition	Ecuador, Egypt, South Korea, Tunisia
Intermediary Regulation	Australia, Argentina, Canada (Ontario), New Zealand, United Kingdom, India
Banking regulation	France, Germany, Italy
US model	United States of America
Prohibited or Highly regulated	China, India, Indonesia, Vietnam, Malaysia, Thailand, South Korea, Singapore, Hong Kong, and Macau

Source: Kirby and Worner (2014)

Incorporation and Regulatory Bodies

2.22 Countries have formulated regulations to monitor and manage the emerging risks of P2P lending platforms. In Asia, South Korea, Malaysia, India, China, Indonesia, and Thailand have passed regulatory frameworks for P2P framework with a clear directive

[3] https://www.scmp.com/business/china-business/article/3033378/chinas-hunan-province-imposes-total-ban-p2p-lenders-after

on the capital requirement and borrowing limits (CCAF, 2021; FSC/Korea, 2020; OJK/Indonesia, 2016; SC/Malaysia, 2023).

Incorporation of P2P Lending Platforms

2.23 **Company Incorporation**: P2P lending platforms are typically incorporated as private companies, subject to the company registration and incorporation processes of the respective country. This involves registering the company, defining its legal structure, and fulfilling other necessary requirements such as obtaining necessary licenses and permits.

2.24 **Compliance with Legal and Regulatory Requirements**: P2P lending platforms must comply with relevant laws and regulations in the country where they operate. This may include financial, consumer protection, and anti-money laundering regulations. Compliance typically involves obtaining necessary licenses and adhering to specific operational and reporting requirements.

Regulatory Bodies

2.25 **Financial Regulators**: Financial regulatory bodies play a crucial role in overseeing P2P lending activities and ensuring compliance with applicable regulations. These regulators vary across jurisdictions and may include central banks, financial services authorities, or securities regulators. Examples include the Financial Conduct Authority (FCA) in the UK, the Securities and Exchange Commission (SEC) in the United States, and the Australian Securities and Investments Commission (ASIC) in Australia, RBI regulates P2P platforms and SEBI regulates equity crowdfunding in India.

2.26 **Consumer Protection Authorities**: P2P lending often involves interactions between lenders and individual borrowers. Consumer protection authorities may have a role in ensuring fair practices, transparency, and safeguarding the interests of borrowers. These bodies can vary in name and authority depending on the jurisdiction.

2.27 **Securities Regulators**: In some cases, P2P lending activities may fall under the scope of securities regulations, particularly if they involve the issuance of securities or investment offerings. Securities regulators are responsible for monitoring adherence to laws and regulations pertaining to securities transactions and the protection of investors.

2.28 **Central Banks**: Central banks can have a regulatory role in P2P lending, particularly if the lending activities involve monetary or financial stability concerns. Central banks often oversee the overall stability and soundness of the financial system.

2.29 It is noteworthy that the specific regulatory bodies involved and the regulatory requirements for P2P lending platforms can differ significantly between countries.

Selected Country Practices

The operational mechanism varies across countries in terms of different aspects such as models, institutions, legal frameworks, and technologies.

United States of America

2.30 The peer-to-peer lending industry in the US started in February 2006 with the launch of Prosper Marketplace and Lending Club. These lending platforms established and flourished in California and later expanded their services to the entire country. Because of fewer restrictions on borrower eligibility during the time of commencement, peer-to-peer platforms experienced a problem of adverse selection and high default rates.

2.31 The three different entities monitor P2P platform. The Securities and Exchange Commission (SEC) monitor the investing side of these platforms, while the Consumer Financial Protection Bureau and the Federal Trade Commission the responsible entities for regulating the borrowing side (Nemoto et al., 2019). SEC mandated that peer-to-peer companies need to register their offerings as securities, according to the Securities Act of 1993 in 2008 (Liu et al., 2015). Following the SEC's mandate, P2P platforms operated a secondary market to enable access to liquidity facility to investors; also, these lending platforms required registration for all members.

2.32 The financial crisis of 2008 turned up to be a huge opportunity for US-based P2P platforms as most of the borrowers approached P2P companies for borrowing. However, as these platforms expanded rapidly, they also faced a mounting accumulation of risks. Moreover, investors are reluctant to behold unnecessary risks. As a result, they demanded for stringent scrutiny of borrowers to curb the persistent rise in defaults rates (Liu et al., 2015). The default rate of borrowers lies between 19 percent and 23 percent (Lyócsa et al., 2022).

India

2.33 With the total volume of $547 million in 2018, India has emerged as the key player in the alternative financial industry in South and Central Asia (CCAC, 2021). Business lending and P2P consumer lending are the two main drivers of P2P lending and crowdfunding. Reserve Bank of India is responsible for regulating the P2P platforms[4], while equity-based crowdfunding lies in the gray area[5].

2.34 India has categorized Peer-to-Peer Lending Platforms under Non-banking Financial Companies. RBI began regulating P2P Lending Platforms under Peer-to-Peer Lending Platform Directions 2017. The limit for lenders and borrowers has been introduced to mitigate risk. Lenders are subject to maximum total exposure of INR 5 million at any point in time in all the platforms (Table 2.5).

2.35 Borrowers are subject to loan cap of INR 1 million at any point in time, across all P2Ps. The exposure of a single lender to the same borrower, across all P2Ps, shall not exceed INR 50 thousand. The maturity of the loans shall not exceed 36 months (Reserve Bank of India, 2017).

Indonesia

2.36 Indonesia experienced a considerable surge in P2P lending volume from $80 million in 2017 to $1451 million in 2018 propelling it to emerge as the key player within the Asia Pacific region.

2.37 The Otoritas Jasa Keuangan[6] (OJK) is responsible for regulating P2P lending industry in Indonesia. OJK has issued a regulation as the P2P Lending Regulation No. 77/POJK.01/2016 (OJK/Indonesia, 2016). The regulation aims to protect borrowers and investors by imposing certain requirements and guidelines on P2P lending platforms.

2.38 Under the regulation, P2P lending platforms in Indonesia are required to obtain a license from the OJK before they can operate. They must also adhere to certain limits on interest rates and fees, and provide adequate risk disclosures to borrowers and investors.

[4] https://www.rbi.org.in/commonperson/English/Scripts/FAQs.aspx?Id=2484
[5] https://www.bqprime.com/law-and-policy/the-legal-danger-to-crowdfunding-platforms
[6] Central Bank of Indonesia

2.39 In addition, P2P lending platforms are required to conduct due diligence on borrowers and investors and maintain records of all transactions. They must also have a minimum paid-up capital of IDR 25 billion and maintain a certain level of liquidity to ensure they can meet the demands of borrowers and investors.

2.40 The OJK also established the Indonesian Fintech Association (AFTECH) to oversee the development of the fintech industry in Indonesia. AFTECH works closely with the OJK to promote innovation and maintain a healthy ecosystem for fintech companies, including P2P lending platforms.

Table 2.5: Paid-up capital and maximum lending limit of P2P platform

Country	Currency	Regulatory Body	Minimum Paid-up capital	Maximum Lending Limit
India	Local	Reserve Bank of India	20 million	500 thousand
Indonesia	Local	Financial Services Authority, Indonesia	25 billion	2 billion
Thailand#	Local	Bank of Thailand	5 million	50 million
China#	Local	-	50 million	200 thousand
South Korea#	Local	Financial Services Commission, South Korea	500 million	50 million

Source: Different P2P regulatory regimes of the respective country

P2P is relatively new and limited information are available for these countries.

Chapter III: Effects, Risks and Preconditions

Effects of P2P Lending

3.1 There are several studies exploring the effect of P2P lending. For instance, Cornaggia et al. (2017) study the impact of P2P on the lending behavior of commercial banks and conclude that banks do not uniformly feel pressure from these lending platforms. They further argued that rural areas experience a decline in personal loan volume due to P2P lending while city areas with competitive banking are unaffected (Cornaggia et al., 2017). Agreeing with this view, Oh and Rosenkranz (2020) find that P2P lending fosters financial services accessibility in rural areas or areas with sparse traditional financial access points.

3.2 Likewise, Havrylchyk et al. (2016) explore the main drivers behind the rapid expansion of P2P online platforms and show that P2P lending platforms foster in countries that are more affected by the financial crisis, have a higher population density, educational attainment, young population, and have more undercapitalized banks, concluding that financial access deters P2P lending.

3.3 Feng et al. (2015) and Tang (2019) find that a tightening of banks' lending criteria induces the P2P lending volume, inferring that low-quality borrower with minimal compliance availability switch to the P2P platform. Oh, and Rosenkranz (2020) also provided a similar argument that P2P lending is successful in economies with low financial access.

Risks Associated with P2P Platforms

3.4 P2P lending involves a few risks because of its nature and ongoing evolution. For example, Lenz (2016) opines that peer-to-peer lending is a riskier from the perspective of a lender as the lender is directly exposed to the credit risk in case of default of the borrower. Moreover, P2P platforms do not take credit risk on their balance sheets. Likewise, Klein et al. (2021) find that non-users ponder P2P lending as a perilous business. They find a departure between lenders' needs and P2P platforms' strategy due to the difference in objective functions. P2P platforms focus on maximizing their earnings, which is primarily earned through transaction fees, while interest is the primary source of income for lenders.

3.5 Interest earnings are the primary source of earnings for banks, so they are cautious towards their loan clients. On the contrary, P2P platforms are independent of changes in interest as they earn from transaction fees (Lenz, 2016). Banks' business model favors depositors, but the business model of the P2P platform does not favor lenders (Lenz, 2016) as P2P companies encourage riskier borrowers as they can charge higher transaction fees and interest rates, while lenders prefer security to high profits (Klein et al., 2021).

3.6 Klein et al. (2021) conclude that lenders are willing to authorize loans for higher education, the establishment of new businesses, and financing new businesses and they avoid loan evergreening. On the contrary, most borrowers take loans to pay debt and clear credit card payments.

Preconditions for a Successful P2P Lending

3.7 There are certain conditions that must be fulfilled before the implementation of P2P lending. Feng et al. (2015) find that borrowers' borrowing history, credit scoring, bank account, house ownership, debt-to-income ratio, and delinquencies affect the success rate of P2P lending. Although P2P lending platforms usually screen borrowers' identification, credit records, monthly income, details of employment, and other credentials, information asymmetry remains a prominent feature of P2P lending (Wang & Greiner, 2011). Consequently, the possibility of adverse selection of borrowers piles up risks to lenders (or investors).

3.8 Adams et al. (2009) state that credit scoring information can significantly mitigate adverse selection. Moreover, the degree of information asymmetry affects the success rate of the P2P platform. The cost of monitoring borrower behavior is too high for investors in a market with asymmetric information.

3.9 Borrowers choose P2P platforms as traditional banks and financial institutions refrain from providing loans. These borrowers can take the advantage of asymmetric information in the P2P platform (Feng et al., 2015). Thus, borrowers with low credit scores may have easy access to credit from the P2P platform which significantly raises the possibility of loan default or delinquency.

3.10 Suryono et al. (2019) carry out an exhaustive review of the P2P lending problem. They find information asymmetry, unavailability of individual credit information, inaccurate credit risk assessment, gender discrimination, and abuse of privacy, among others, are the major problems. They also provide some potential solutions such as big data, the use of machine learning algorithms, demographic information, loan characteristics, and exploring friendship networks, among others.

3.11 The preconditions can be summarized as follows:

- **Credit scoring**[7]: Credit scoring is a composite score that estimates the ability of individuals to fulfill their financial commitments. Credit score is one of the 6 C's that lenders look for when evaluating a potential business loan borrower. It provides a basis for selecting qualified borrowers among the pool of borrowers as a high credit scoring increases the trustworthiness of the borrowers.
- **Credit history**: Credit records or history refers to the systematic records of debts, debt repayment, and debt servicing. An individual or firms with clean credit records always meet the deadlines for payments of principal and interest. Borrowers with clean credit records have higher credit scores.
- **Ownership of assets**: Ownership of assets refers to the number of assets an individual or a firm holds. The borrower's capacity to repay the loan is assessed by considering the ownership of assets. Borrowers with ownership of high-value assets have a low chance of default, therefore they have higher credit scoring. Also, investors can receive their investment back by selling off or liquidating the assets of a borrower.
- **Existing debts**: Lenders always look after existing debts before disbursing loans. Lenders are reluctant to disburse funds to borrowers with huge debts as they are suspicious of repayment of debts on time. Information about a borrower's loan from formal sources may be accessible to lenders, but such information will not be available for loans from informal sources.
- **Debt servicing to income ratio**: Debt servicing to income ratio is one of the important indicators that lenders use in assessing the borrower. Lenders generally avoid the risk of lending to a borrower who is unable to service a debt with existing

[7] Credit scoring and credit rating both measure creditworthiness. Credit scoring is used by lenders to determine the risks of extending credit to individuals, while credit rating is used by investors to determine the riskiness of investing in corporations or companies.

income. This requires borrowers to disclose their true income or easy availability of information on borrower's income.

- **Details of Employment**: Employment is the major source of income. Individuals' income streams depend upon the nature of employment. Individuals with a permanent job have a stable income, while contractual jobholders are less likely to have consistent income steam.
- **Number of loan accounts in BFIs**: An individual may have multiple loan accounts inferring that the same individual can have loan from multiple banks. The number of loan accounts in multiple BFIs reveal the indebtedness of a borrower.

Key Performance Indicators

3.12 The performance of P2P platforms can be summarized in terms of indicators. Agrawal et al. (2015) find that platforms with rapid growth in loan volume tended to have higher survival rates. They conclude that investment propensity increases with an increase in the volume of funds raised. A P2P firm with a larger investment base is more likely to attract investors thereby increasing investment propensity.

3.13 Song et al. (2018) assessed the performance of a Peer-to-Peer online lending platform in China. They have identified the key performance indicators of the P2P lending platform. Average funding time, average loan interest rate, number of requests, number of lenders, total lending volume, due balance, among others, are the key performance indicators (Table 3.1).

Table 3.1: Key performance indicator

Indicators	**Performance Indicator**
Average funding time	Reflects the efficiency in disbursing loans
Average loan interest rate	Reflects the borrowers' costs and the lenders' benefits
Number of requests	Reflects the trustworthiness and popularity of the P2P platform
Total lending volume	Reflects the total asset size of the platform
Number of lenders	Reflects the trustworthiness and popularity of the P2P platform
Due balance	Reflects the liability of the platform

Source: Song et al. (2018)

Chapter IV: Feasibility of P2P Lending in Nepal

Status of Access to Credit

4.1 Nepal has made significant progress in financial inclusion, as indicated by the increase in the percentage of adults using formal financial services. The percentage of adults using such services has risen from 61% in 2014 to 90% in 2022 (UNCDF, 2023).

4.2 Compared to 2014, the use of credit from formal financial institution perceptibly surged in 2022. Nepal witnessed a drastic rise in percent of adults securing credit from formal financial institutions. In 2014, only about 18 percent of adults utilized credit from formal financial institutions compared to 47 percent in 2022 (UNCDF 2023)[8].

4.3 NRB Act (2002) has entitled the NRB to the responsibility of increasing access to financial services and increasing public confidence in the banking and financial system. The Act also empowers NRB to formulate necessary policies to maintain financial and macroeconomic stability. Concerning digitalization in the financial system, NRB has incorporated a "Digitalized Financial Ecosystem" as one of the strategic directions in the Fourth Strategic Plan 2022-2026.

4.4 Despite the recent improvement in access to finance outlined above, there is a need for innovative finance such as P2P lending to enhance the access to credit and support long-term growth.

Institutional Mechanism

4.5 P2P lending is a relatively new concept in Nepal, and there is no one-size-fits-all institutional mechanism that would be best for everyone. However, there are a few key factors that should be considered when designing a P2P lending institution in Nepal.

4.6 Nepal's regulatory environment for financial institutions is still evolving, and it is important to ensure that any P2P lending institution is operating in compliance with all applicable laws and regulations.

4.7 One of the main goals of P2P lending is to enable borrowers – who are excluded or underserved by traditional financial institutions – to have easy access to finance.

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8 This is with the overview of the Financial Inclusion Dimension of Nepal, derived with the data from the Household Survey project with IFC.

Therefore, it is important to ensure that the P2P lending institution has a strong borrower screening process in place to assess the creditworthiness of potential borrowers.

4.8 While designing the mechanism, it is important to consider the issues related to interest rates, and fees. Interest rates on P2P loans are typically higher than those offered by traditional financial institutions. This is because P2P lenders are taking on more risk by lending to borrowers who may not have a good credit history. However, interest rates should still be competitive enough to attract lenders to the platform. Likewise, P2P lenders typically charge fees to both borrowers and lenders. These fees can cover the costs of operating the platform and providing customer service. However, fees should be kept to a minimum to make P2P lending more affordable for borrowers and lenders.

4.9 There should be a combination of regulatory measures and industry best practices while determining the institutional mechanism, which are regulatory framework, licensing and registration, investor and borrower protection, risk assessment and creditworthiness, risk mitigation and diversification, capital adequacy requirements, collaborations with financial institutions, investor education and awareness, regular monitoring and supervision.

Potential Benefits of P2P Lending

4.10 There are a number of potential benefits of P2P lending in the context of Nepal. It can provide easier access to finance, particularly for individuals and small businesses that might encounter difficulties in securing loans from convectional financial institutions. It allows borrowers, especially those in rural areas, to connect directly with lenders, bypassing the need for extensive documentation and collateral requirements.

4.11 P2P lending has the potential to promote financial inclusion by reaching underserved populations and marginalized communities. It can cater to borrowers who may not have a formal credit history or access to mainstream banking services, thereby helping to bridge the financial inclusion gap.

4.12 P2P lending diversifies the funding sources available to borrowers. While traditional lenders like MFIs and cooperatives play a vital role, P2P lending can introduce additional funding options, allowing borrowers to tap into a larger pool of lenders, both locally and globally.

4.13 P2P lending introduces market competition, which can lead to competitive interest rates for borrowers. This can be particularly advantageous for individuals and small businesses who may have limited options and may face higher interest rates from traditional lenders.

4.14 P2P lending platforms leverage technology to streamline the lending process, making it faster and more efficient. Digital platforms can facilitate loan applications, credit assessments, and disbursements, reducing administrative burdens and turnaround times for borrowers. P2P lending platforms often employ sophisticated risk assessment techniques, including the use of data analytics and credit scoring models. This can help assess borrower creditworthiness more accurately, thereby improving risk management practices and reducing default rates.

4.15 P2P lending provides an alternative investment avenue for individuals looking to diversify their investment portfolios. Lenders can earn interest income by lending directly to borrowers, potentially achieving higher returns compared to traditional savings or investment options.

4.16 P2P lending fosters innovation and entrepreneurship by facilitating access to capital for aspiring entrepreneurs and startups. It allows individuals with innovative business ideas to seek funding directly from lenders, fostering economic growth and job creation.

4.17 While existing lending platforms like MFIs and cooperatives have their merits, P2P lending complements and expands the range of available options, addressing specific gaps in the financial ecosystem of Nepal. By leveraging technology, market competition, and inclusive lending practices, P2P lending can play a significant role in enhancing financial access, promoting entrepreneurship, and generating competitiveness in the banking system.

Preconditions and Challenges

4.18 The successful implementation of P2P lending in Nepal calls for the fulfillment of certain preconditions. Table 4.1 summarizes the preconditions and their status in Nepal. The preconditions presented Table 4.1 apply to individuals or firms applying for a loan from a P2P platform.

Table 4.1: Preconditions and their status in Nepal

SN	Precondition	Status in Nepal
1	Credit scoring[9]	Credit ratings are available for listed companies, but credit scoring for individuals are not available.
2	Credit history	Records of credits disbursed by BFIs are available at Credit Information Center.
3	Ownership of assets	Assets include land, building, vehicles, etc. The centralized database on ownership of assets is not readily available. So, it is difficult to obtain data on the ownership of assets by an individual or firm.
4	Total income	The informal sector had a bigger share of 62.2 percent in employment (CBS, 2018b) and 49.9 percent of establishments are not registered (CBS, 2018a). Informal sector workers self-declare their income. Thus, exact figures on total income are only available for those who work in the formal sector.
5	Debt service to income ratio	Difficulty in obtaining accurate income limits the accuracy of the debt service to income ratio.
6	Details of employment	Individuals working in the informal sector self-declare their occupation. Only formal sector employees can declare their occupation.
7	Number of loan account in BFIs	The lack of unique identifier numbers makes it difficult to identify the exact number of loan accounts maintained at BFIs by an individual.

4.19 A successful P2P platform requires an individual's financial and personal information. The success of the P2P platform lies in the availability of borrowers' information such as credit history, credit scoring, ownership of assets, etc. (Feng et al., 2015). P2P

9 Credit scoring and credit rating both measure creditworthiness. Credit scoring is used by lenders to determine the risks of extending credit to individuals, while credit rating is used by investors to determine the riskiness of investing in corporations or companies.

platforms judge individual borrowers based on all available information. Access to detailed personal and financial information helps the platform to perfectly identify the potential borrower. A lack of disaggregated and detailed borrower's information increases the risk of adverse selection and consequent loan defaults or delinquencies.

4.20 The limited financial infrastructure in Nepal impedes the effectiveness of P2P lending. P2P platforms require highly disaggregated information about the borrower such as credit history, demographic and community characteristics, and centralized Know Your Customer (KYC), among others, to make a judgment on credit requests. The success rate of P2P lending is directly proportional to the availability of information about the borrower; therefore, underdeveloped financial infrastructure inhibits the growth of P2P lending.

4.21 Though the P2P platform is likely to expand financial inclusion, lenders (or investors) are at high risk. Availability of detailed borrower information, such as credit history, credit score, number of accounts in BFIs, and other credentials, are preconditions for the success of the P2P platform, but it is not readily available and is in developing phase in Nepal. The unavailability of such information limits these platforms from properly assessing the borrower. Consequently, those borrowers considered unfit for loan disbursement by traditional BFIs is likely to enjoy easy access to credit from these platforms ultimately posing a threat to investors. Also, the possibility of loan evergreening may substantially increase as discussed by Klein et al. (2021) which poses a threat to both investors and the financial system.

4.22 Moreover, the P2P platform requires strict vigilance, stringent monitoring compliance, and strong supervisory capability. The unavailability of disaggregated information about the borrowers in Nepal severely hinders the P2P platform's ability to identify the quality borrowers. A regulatory framework must be designed considering the probable risk of adverse selection, fraud, and money laundering. The framework should impose a cap on investment limits for investors, and borrowing limits for borrowers, and provide directives on capital requirements.

Implementing P2P

4.23 The P2P platform is likely to play a pivotal role in expanding financial inclusion in Nepal. The rural areas with poor access to financial services from BFIs can have access to easy credit as suggested by Oh and Rosenkranz (2020). Moreover, 67 percent of Nepalese people have at least one account in BFIs (NRB, 2021) suggesting that about one-third of people are still unbanked. P2P platforms can provide financial services to the unbanked population that significantly improves access to financial services.

4.24 The P2P platform could be a relatively favorable option in having the alternative platform to address the significant financial gaps, particularly in Nepal once the preconditions are met. Thus, it is important to cautiously formalize the idea of P2P lending while simultaneously developing financial market infrastructure to meet conditions for successful implementation. These options may include the policies such as the maximum limit that investors can invest in P2P platforms, maximum maturity, and limit on borrowing, among others. Such policy action requires vigilance of regulatory authorities towards these platforms and must maintain a robust centralized database to monitor the activities of these platforms.

4.25 The debt-based model can be one of the suitable models for Nepal. Among the debt-based models, Fractional Matchmaking P2P Plan (FMPP)[10] may be appropriate as the fund is diversified to the lowest possible fraction thus reducing the risk to the investors. The lending by P2P platforms should be channelized to the productive sector. Startups and micro, small, and medium scale industries should be targeted communities for P2P.

10 It's a loan-matching algorithm designed to make effective matchmaking between investor and borrower to achieve maximum diversification across a maximum number of loans (Lenden Club, 2023).

Chapter V: Conclusion and Way Forward

Conclusion

5.1 This study explores the P2P lending models and country practices, and observes the relevance and feasibility of P2P lending and crowdfunding platforms in Nepal. The rapid development of technology and its massive use in financial innovations have changed the way economic agents transact. A balanced ecosystem of financial markets has been affected by the rise of fintech companies, including P2P lending. Therefore, both regulators and financial institutions have realized the necessity to reorient traditional financial intermediation.

5.2 Countries have been vigilant towards fintech innovations, including P2P platforms. Countries have formulated regulations to monitor and manage the emerging risks of P2P lending platforms. In Asia, South Korea, Malaysia, India, China, Indonesia, and Thailand have passed regulatory frameworks for the P2P framework with a clear directive on the capital requirement and borrowing limits. Countries have introduced the minimum paid-up capital requirement; however, the range of paid-up capital significantly varies across the countries reviewed.

5.3 Literature has clearly traced out major preconditions for operating P2P platforms. Credit score, credit history, ownership of assets, existing debts, debt servicing to income ratio, details of employment, and number of bank accounts are some of the preconditions that are common in most of the literature. Fulfillment of these preconditions is crucial for the successful operation of P2P platforms. P2P platforms may exist even in the process of developing financial infrastructure and fulfilling the preconditions but there may be unprecedented risks that might jeopardize the sustainability of the financial system.

5.4 The limited financial infrastructure in Nepal impedes the effectiveness of P2P lending. P2P platforms require highly disaggregated information about the borrower such as credit history, demographic and community characteristics, and centralized KYC, among others, to make a judgment on credit requests. The success rate of P2P lending is directly proportional to the availability of information about the borrower; therefore, underdeveloped financial infrastructure inhibits the growth of P2P lending.

5.5 P2P lending is a relatively new concept in Nepal. The P2P platform requires strict vigilance, stringent monitoring compliance, and strong supervisory capability. The limited availability of disaggregated information about the borrowers in Nepal severely hinders the P2P platform's ability to identify the quality of borrowers. A regulatory framework must be designed considering the probable risk of adverse selection, fraud, and money laundering. The framework should impose a cap on investment limits for investors, and borrowing limits for borrowers, and provide directives on capital requirements.

5.6 The behavior of investors is undoubtedly influenced by the degree of trust in these platforms. Hence, a joint - intensive effort shall be made by both P2P lending advocates and regulators to build and retain trust toward these platforms. Regulatory authorities can cautiously formalize the P2P platform while in the phase of developing required financial infrastructure and fulfilling these preconditions by adopting appropriate policies for investors, such as the maximum limit that investors can invest in P2P platforms, maximum maturity, and the limit on borrowing, among others. Such policy action by regulatory authorities requires vigilance towards these platforms and must maintain a robust centralized database to monitor the activities of these platforms.

Way Forward

5.7 Nepal should also catch up with the development in the global environment in the financial system. To promote alternative sources and investors, and to create competitiveness, it is better to move forward to embrace new form of financial intermediation. The following things need to be done.

5.7.1 Developing legal framework by amending referral Acts and developing licensing policy for P2P lending.

5.7.2 Developing financial infrastructure, such as credit scoring system, along with unique identifier for individuals to fulfill the conditions for successful implementation of P2P lending.

5.7.3 Designing regulatory policies for P2P lending. To start with NRB can provide license to a very few operators by allowing them to lend and borrow a small sum. This will help us to understand the demand for these new types of financial services and the likely benefits and risks. Later on, NRB can move forward for the full phase operation of this type of platform.

5.7.4 Evaluating the feedbacks and comments on this consultative document from concerned stakeholders before its implementation considering the state of technology and knowledge of P2P.

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