

A Study on Indian Lending FinTech Ecosystem

Prassanna Rao

Abstract

Financial inclusion can be better achieved with digital technology. Digital technology improves the accessibility and affordability of financial services for the previously unbanked or under banked individuals and MSMEs. The term fintech is used to describe any company that is into financial technology. It encompasses companies that provide financial services using the internet, software, mobile devices, cloud services or any other kind of technology. In the past few years, India's economic performance has largely been steady, and it has been able to hold ground, despite frequent bouts of external as well as internal risks. However, the latest GDP data from various agencies points towards moderating growth levels. In order to regain a consistent 7-8 % growth rate, the role of medium, small and micro enterprises (MSMEs) is very critical. However, due to their informal nature of operations, MSMEs lack access to formal credit as banks face several challenges in credit risk assessment owing to lack of financial information, historical cash flow data, etc. Assessing the creditworthiness of an MSME can be difficult due to information asymmetry, particularly with respect to financial performance of the business. Consequently, MSMEs are plagued by a massive credit demand supply mismatch. As per estimates, the overall demand for both debt and equity finance by Indian MSMEs was around INR 87.7 trillion, of which the debt demand alone was INR 69.3 trillion and formal sources catered to only 16% of the total MSME debt, i.e. INR 10.9 trillion. With the Government of India (GoI) and regulators pushing for improved digital financial infrastructure, digital lending has provided a strong impetus to financial inclusion, especially helping borrowers who are otherwise unlikely to benefit from formal sources of finance. New lending platforms are transforming credit evaluation and loan origination, as well as opening consumer lending to non-traditional sources of capital. Many emerging innovations leverage advanced algorithms and computing power to automate activities that were once highly manual, allowing them to offer cheaper, faster, and more scalable alternative financial products and services. The major business opportunities in the FinTech lending industry are cluster-centred funding, point-of-sale (POS)-based lending, peer-to-peer (P2P) lending, invoice-based lending, cash flow-based lending and online microcredit. A mix of traditional credit facilities from banks, NBFCs and innovative financing mechanisms from new age digital lenders will be critical for the growth of the MSME sector. Collaborative strategies can lead to better outcomes for banks and FinTechs by helping both develop and refine productive ways to evolve and serve MSMEs better. Some positive outcomes of FinTech-bank partnerships are already visible. This paper aims to analyse about new-age FinTech lenders with a comprehensive view of the FinTech lending landscape in Indian to understand key market trends, drivers and enablers of the ecosystem, emerging technologies in the lending sector and players operating in the market.

Keywords: Financial Inclusion, Fintech, Ecosystem

Prassanna Rao, Faculty In Commerce, S.K.C.G College, Paralakhemundi, Orissa, India

Introduction

Innovation and technology have brought about a radical change in traditional financial services. The world has seen the emergence of more than 12,000 start-ups and massive global investment of USD 19 billion in 2015 in the fintech space. These innovators are utilizing tech tools to bring in seamless and innovative financial services for the banked and unbanked population. The global fintech software and services sector is expected to boom as a USD 45 billion opportunity by 2020, growing at a compounded annual growth rate of 7.1 per cent as per NASSCOM. Fintech may be defined as technology-based businesses that compete against, enable and/or collaborate with financial institutions. Fintech start-up firms engage in external partnerships with financial institutions, universities and research institutions, technology experts, government agencies, industry consultants and associations. Through these partnerships, they create a highly integrated ecosystem that brings with it the expertise, experience, technology and facilities of all the entities together. Growth and market success of any fintech hub originate from an integrated ecosystem. A successful fintech ecosystem is where all the market participants connect, engage and share ideas across vibrant communities and networks, as well as identify and convert opportunities into business. In the current age of technology driven financial services, no market participant can afford to operate in silos.

India has a unique FinTech lending ecosystem due to the nature of its market and regulatory approach. The evolution of India's FinTech lending structure, even though similar, is not necessarily comparable to other countries. A majority of underserved individuals and MSMEs with limited physical and data access create differentiated business models, supported by a principle-based regulatory approach. In an evolving economy like India, FinTech lenders must navigate multi-faceted webs of compliances, regulations and the current domestic and global macroeconomic environment. This has raised the cost of borrowing, leading to supply-side constraints for alternative digital lenders. FinTech lenders are now more focused on developing innovative products and catering to low income, semi-urban and rural customers in unorganized sectors. In such a scenario, FinTech lenders are adopting business and operational models powered by cutting-edge technologies such as big data, open application programming interface (API) and artificial intelligence (AI) that seamlessly facilitate the design, launch, implementation and execution of tailored and hyper-personalized products and services. Investing in new technologies and strategic partnerships with incumbent financial institutions (FIs) also allows digital lenders to lower the cost of increasing their customer base, reduce customer acquisition costs, provide services to existing customers or derisk the portfolio, while trying to handle the increasing volume of individuals and businesses availing formal credit in a growing economy. Technological advances have already shown tangible results in enhancing access to financial services by lowering operational costs and ensuring that end consumers are able to access financial services, even in areas where bank branches may not exist. Advancements in both storage and computation of data and the impetus to financial infrastructure development from the government will encourage and enable financial inclusion. Within the ambit of financial inclusion, access to funds and capital is a key problem to solve. The FinTech boom that India has witnessed over the last few years has given rise to some interesting opportunities to tackle this problem. The low level of financial inclusion is a barrier to socio-economic development in developing countries. Some of the new enablers for furthering financial inclusion are account aggregator models and public credit registries,

and a lot would also depend on how the digital on-boarding and know your customer (KYC) processes of MSMEs and individuals evolve. FICCI's FinTech Committee has been working closely with GoI and regulators to promote digital financial inclusion in the country.

Current Digital Lending Models in India

Figure.1 The Key Digital Lending Models in India

<i>Domain</i>	<i>Key components</i>
P2P lending	Digital marketplaces that connect borrowers (both individuals and organizations) with lenders, allowing quick access to low-cost loans at affordable costs
Invoice financing	Short-term working capital credit to MSMEs, based on their unpaid customer invoices, to meet MSMEs' short-term liquidity requirements
Crowdfunding	Digital platforms that enable investees to raise external credit from a large group of investors, by allowing investees to exhibit their business cases, funding requirement and market potential
Pay later loans	Lenders that disburse instant, small-ticket sized loans with the 'buy now and pay later' model for meeting customers' purchases
Mobile lending	Lenders that offer mobile loans to customers by assessing their creditworthiness by leveraging mobile phone data such as call patterns and mobile e-money usage
Digital mortgage	Lenders that facilitate mortgage purchases through end-to-end digitization of the traditional mortgage loan process, from the application stage to disbursement, through digital channels in order to reduce the high turnaround times prevalent in the existing traditional model
PoS lending	A partnership model with FS lenders where these players finance online shoppers' purchases by utilizing both conventional data like bank statements and unconventional data like online transaction history
Supply chain financing	Marketplaces that tie up with direct lending NBFCs to target merchants selling their goods and services online, by leveraging the huge amount of merchant data residing on these channels.

Figure.2 Digital Lending Use Cases Illustrations for India

Loan recharge	A leading FinTech organization provides the first ever recharge loan service based on the credit limit a user receives depending on the usage of their app. After repaying the whole loan amount, user gets incentives. It gives the option to pay utility bills later. They have a high consumer focus catering to people in tier-two and tier-three markets who have relatively limited access to the internet, and lower financial power.
Bank and FinTech partnership	With 5 years of contribution towards achieving financial inclusion, one of the digital lending start-ups has created revolution in this space. What helped them achieve this is transparency in process, customization, and apply anywhere-anytime model. They plan to partner with startups in e-commerce, food delivery and mobility etc., to reach the masses they will tie up with kirana store owners, small mom and pop stores etc., which will help strengthen the process of financial inclusion.
For the agri-sector	An agri-tech start-up aims to be a one-stop solution for farmers in distress. It helps farmers to improve productivity by offering loan at minimal rates and also connects them to local retailers to procure agri inputs. It's operational at select villages but plans to expand further. Partnerships with NBFC will be an added advantage.

Invoice discounting marketplace	One of India's first invoice discounting marketplace aims to provide short term loans to SMEs but their model is such that they discount unpaid invoices raised against MNCs to a network of financiers. Acquisitions are made to enhance their technological capability.
Repay loan daily	A leading NBFC and a pioneer in SME lending offers an option to repay a loan daily. The company offers unsecured loans to merchants using their propriety technology platform. Their USP is minimum documentation and doorstep service.

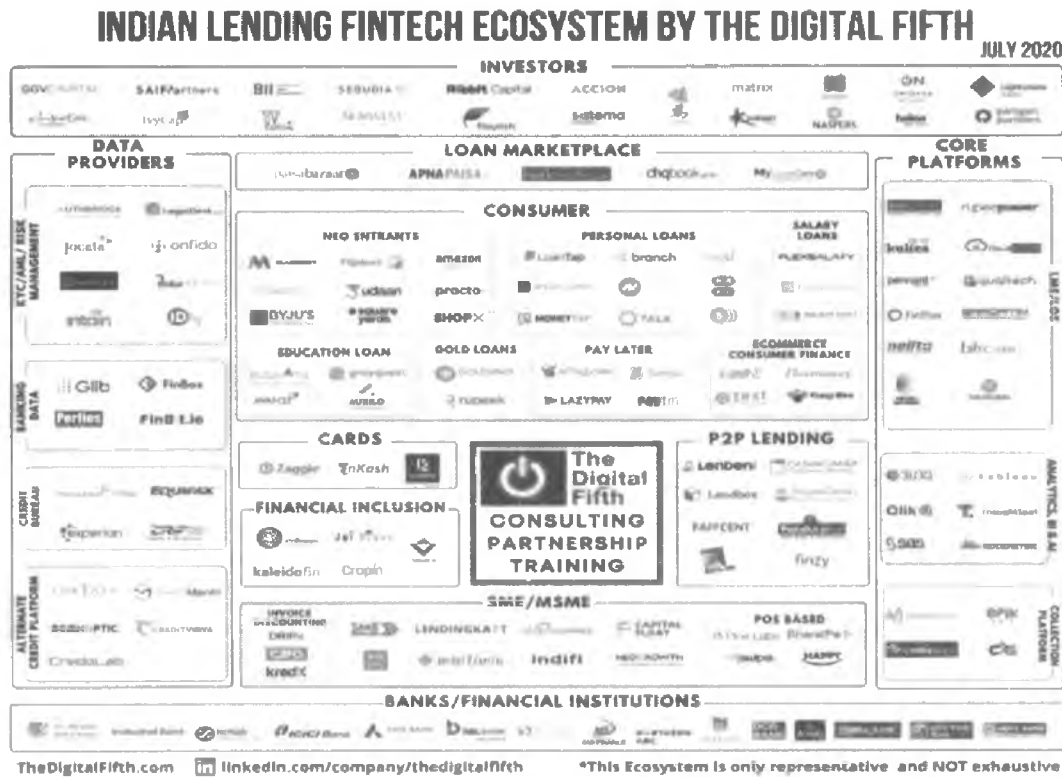
Top 10 Fintech Companies in the Indian Lending Space

- **MoneyTap:** MoneyTap is a Bengaluru-based fintech company. It disrupted the digital lending business by offering lines of credit in the form of personal loans for consumers, in partnership with RBL Bank. It recently received an NBFC licence, which they intend to use to enter into co-lending space with their lending partners. This allows them to offer better interest rates to customers. MoneyTap has been offering quick collateral-free personal loans to borrowers since 2016. One of its notable features is that it has a very simple documentation process for getting a personal loan. The mobile app also allows you to keep track of all the borrowings.
- **Capital Float:** Capital Float is owned by CapFloat Financial Services and it offers specialized financial loans and credit to businesses. This fintech company uses its own proprietary loan underwriting systems to lend to potential borrowers. It has partnerships with clients like Uber, Paytm and Shopclues. It is now aiming to reach out to kirana store owners and small-time merchants.
- **MobiKwik:** MobiKwik was founded in 2009 and it started as a digital payments company, where it provided a phone-based payment system. The company eventually grew into a digital financial services platform and boasts of a customer base of 100 million.
- **Shubh Loans:** This Bengaluru-based fintech startup allows borrowers to avail a loan within the range of Rs.75,000 to Rs.5 lakh. They aim to provide loans to the underserved segment in India. They offer an easy documentation process, where an agent will pick up the documents at a pre-scheduled date and time.
- **Lending Kart:** Founded in 2014, LendingKart's primary mission is to make it easy for SMEs (small and medium enterprises) in India to have easy credit access. It operates as an NBFC, and focuses on the MSME lending and capital space. LendingKart uses big data analytics to help lenders determine a borrower's creditworthiness. It also completes the loan disbursement process much quicker than the traditional banks.
- **Faircent:** Faircent is India's first RBI registered peer-to-peer lending marketplace where an individual can lend money to a borrower. Their mission is to provide a platform that connects those in need of credit with institutions and individuals who are willing to lend. Their technology speeds up the process and the borrowers can get the required funds at affordable interest rates. The lenders also get the best possible return on their investment.
- **Neo Growth:** NeoGrowth offers business loans to SMEs and funds small and medium-sized retailers and online vendors in the country. It has over 6000 registered lenders and 30,000 borrowers. It has an average of Rs. 1 crore loan disbursements every month.

- **Insta Kash:** InstaKash is a personal loan app that has a simple process when it comes to lending money. It currently offers business loans and lines of credit to small businesses. They have made the application process really simple and fast.
- **India Lends:** IndiaLends is a fintech platform whose objective is to reorganize the unorganized lending sector in the country using its underwriting technologies and techniques. It helps SMEs and self-employed individuals get unsecured loans at fair rates of interest easily.
- **Loan Tap:** This is an online platform which offers customized loan products to a younger segment like millennials and underserved audience. If a salaried professional, can get approved for instant, flexible loans from Loan Tap. One can choose, compare and customize loans from various offerings such as a personal loan.

There really is no better time than now in the lending and borrowing space. With so many apps for a personal loan, one can apply for a personal loan or a business loan with ease.

Figure.3: Indian Lending Fintech Ecosystem



Ecosystem Coverage of the Indian Fintech Sector:

- **Government**

The government is naturally the prima facie catalyst for the success or failure of fintech in a heavily regulated financial industry. The Government of India along with regulators such as SEBI and RBI are aggressively supporting the ambition of the Indian economy to become a cashless digital economy and emerge as a strong fintech ecosystem via both funding and promotional initiatives. The following multi-pronged approach has been taken to enable penetration of the digitally enabled financial platforms to the institutional and public communities:

- **Funding Support**

- The Start-Up India initiative launched by the Government of India in January 2016 includes USD 1.5 billion fund for start-ups.

- **Financial Inclusion and Enablement**

- Jan Dhan Yojana: added over 200 million unbanked individuals into the banking sector
- Aadhar has been extended for pension, provident fund and the Jan Dhan Yojana.

- **Tax and Surcharge Relief:**

- Tax rebates for merchants accepting more than 50 percent⁰⁶ of their transactions digitally.
- 80 percent⁰⁶ rebates on the patent costs for start-ups.
- Income tax exemption for start-ups for first three years.
- Exemption on capital gains tax for investments in unlisted companies for longer than 24 months (from 36 months needed earlier).
- Surcharge on online and card payments for availing of government services proposed to be withdrawn by the Ministry of Finance.

- **Infrastructure Support:**

- The Digital India and Smart Cities initiatives have been launched to promote digital infrastructure development in the country as well as attract foreign investments.
- The government recently launched a dedicated portal to provide ease in registration to start-ups.

- **IP Facilitation Support:**

- Startups will get support from the government in expenses of facilitators for their patents filing, trademark and other design work.

Lending fintech ecosystem is going through a tough phase, where existing business models face challenges in terms of sustenance and valuation. This phase will re-baseline the ecosystem with the following changes:

- **Banks / NBFCs:** Significant players are moving towards digital to help build books as their branches are expected to generate limited business. These players will also look for

digital transformation for reducing their Cost Income Ratio to compensate for the anticipated losses on the credit side. These lenders will consume services of B2B players, including Data Providers, Lending, and Collection Platforms. These lenders will also partner with Fintechs for sourcing loans across Consumers as well as the SME segment.

- Lending Fintechs (Consumer & SMEs) are working on multiple approaches including:
 - Pivoting: Many players are moving towards NeoBanking to secure their businesses from "dependency on credit.
 - Widening of Portfolio: Single product startups are adding newer products like supply chain financing.
 - Performance Improvement: Sharper players are using this time of lower credit activities for improving their processes, products, and partnerships.
 - Downsizing & Closure: The recruitment market is inundated with ex-employees of these Fintechs. Few short-term lenders have already closed shop as they lost significant portfolio due to moratorium.
 - Raising Funds: Investors are backing their current portfolio instead of funding newer ones.

B2B players like those providing banking data, KYC platform, Alternate Credit Platforms, and LOS / LMS will see higher traction in the next 12 months as more and more lenders will utilize them to become efficient. Significant funding will move towards the B2B segment as investors look for innovations in areas beyond direct lending.

The Digital Lending Ecosystem can be broadly classified into 6 segments:

The bottom layer consists of financial institutions like Banks and NBFCs. They are the backbone of the entire ecosystem as they provide a major portion of the capital for lending. The players in this layer are traditionally large and highly regulated by the RBI. They form partnerships with fintech players, who provide them access to the untapped segments of the economy.



Indian Fintech Ecosystem: Four Eras of Growth and Contraction

- **Before 2010:**

The initial stage of development of digital marketplaces focused on generating leads for loans and insurance business

- **2010 - 2014:**

Like every other ecosystem in the world, Indian Payment ecosystem grew immensely across wallets, pre-paid cards, point of sale platforms, payment gateway platforms

- **2015 - 2018:**

Introduction of Indiastack (Aadhaar / eKYC / UPI / eSign etc) simplified as well as disrupted Payment, Lending, Insurance and Wealth business. While wallets collapsed due to UPI, Lending Fintechs / Insuretech prospered. Wealth business went through challenges due to Direct plans of Mutual Funds.

- **2019 till Date:**

Indiastack continues to positively impact Fintechs with newer services. NeoBanks have emerged as a segment of choice for investors. Neo-Entrants are introducing "Fintech as a service line" in their current business models by either developing it organically or buying out Fintechs. Lending startups are going through the evolution phase. Complex areas like Trade Finance and B2B startups are getting support in the new wave.

Collaboration is the key to ensuring stable financing and sufficient loan portfolio. As the industry grows, balancing demand and supply in the platform becomes crucial. Through collaboration with financial institutions and tech companies, FinTech players may have a more stable source of funds while also increasing wider use cases of their loan portfolio. Capability to develop collaboration becomes a must-have competitive advantage for players. By making financial services accessible at affordable costs to all individuals and businesses, irrespective of net worth and size, financial inclusion strives to address and offer solutions to the constraints that exclude people from participating in the financial sector. Research shows that countries with deeper levels of financial inclusion - defined as access to affordable, appropriate financial services - have stronger GDP growth rates and lower income inequality. A modern, growing and robust economy rests and grows on the pillars of financial inclusion, which entails providing access to financial services and products to all individuals and businesses across the social spectrum at affordable costs, in a timely manner and tailored to their needs, from reliable and responsible providers. In 2014, 62% of adults worldwide had a bank account, but in India, only 53% of adults had a bank account, as per the 2014 Global Findex. But GoI's push for financial inclusion through JAM (Pradhan Mantri Jan Dhan Yojana [PMJDY], Aadhaar and mobile connectivity) since 2014 has increased the percentage of adults in India having bank accounts to 80%, as per the 2017 Global Findex Report. As per government data, 37.3 crore bank accounts have been opened under the PMJDY initiative till October 2019. Though in absolute numbers, India still has a population which is considerably underbanked and unbanked, and GoI would focus on them as a part of its pro-financial inclusion policies. Further, use of advanced technologies and initiatives by traditional banking sector players and FinTechs is also gradually resulting in availability of financial products and services to the bottom of the pyramid segment, who have otherwise been largely devoid of basic bank accounts, credit and other financial services. Macroeconomic studies and evidence demonstrate that countries with far-reaching financial inclusion tend to achieve faster growth and lower income inequality. These studies further show that financial inclusion also boosts and improves local economic activity. A study by Burgess and Pande used state-

level data in India to show that opening bank branches in under banked and unbanked rural localities led to a substantial reduction in rural poverty.

The Evolution of FinTech

FinTech is not a new concept. The term FinTech can be traced to the early 1990s and now refers to a rapidly developing evolutionary process across financial services. This trend only began to attract the attention of regulators, industry participants, consumers, and academics in 2014. The evolution of FinTech has unfolded in three stages. The first is called as FinTech 1.0, occurred from 1866 to 1967, when the financial services industry remained largely analogue despite being heavily interlinked with technology. The next period, FinTech 2.0, extended from 1968 to 2008, an era characterized by the development of digital technology for communications and transactions and thus the growing digitization of finance. Since 2009, in the period we call FinTech 3.0, new startups and established technology, ecommerce, and social media companies have begun to deliver financial products and services directly to the public as well as to businesses, including banks.

Essentially, the recent growth of FinTech is attributable to a bottom-up movement driven by tech firms and startups.

- **FinTech 1.0 (1866-1967)**

Finance and technology have had a long history of mutual reinforcement. Financial transactions were aided by the emergence of early calculation technologies, such as the abacus. Finance evolved alongside trade, and double entry accounting emerged as a result in the late Middle Ages and Renaissance. The late 1600s saw a European financial revolution featuring the rise of joint stock companies, insurance, and banking—all based on double entry accounting—which was essential to the Industrial Revolution. The relationship between finance and technology laid the foundations for the modern period. In the late 19th century, technologies such as the telegraph, railroads, and steamships helped forge financial connections across borders. In 1866, the fundamental infrastructure that enabled a period of strong financial globalization (stretching from 1866 to 1913) was the laying of the transatlantic telegraph cable, followed by rapid post-World War II technological developments. By the end of this period, a global telex network had been implemented, which provided the communications foundation on which the next stage of FinTech would unfold.

- **FinTech 2.0 (1967-2008)**

The late 1960s and the 1970s saw rapid advances in electronic payment systems. Indeed, the basis of modern automated clearing services was formed by the establishment of the Inter-Bank Computer Bureau in the United Kingdom in 1968. The US Clearing House Interbank Payments System followed in 1970, and Fedwire was introduced soon after. Reflecting the need to link domestic payment systems, the Society of Worldwide Interbank Financial Telecommunications (SWIFT) was established in 1973, followed shortly thereafter by the 1974 collapse of Herstatt Bank—an event that highlighted the risks of increasing international financial links. This crisis served as the catalyst for the first major regulatory initiative: the establishment in 1975 of the Basel Committee on Banking Supervision of the

Bank for International Settlements, leading to a series of international soft-law agreements. In 1987, "Black Monday" saw stock markets crash globally. The effects were a reminder that global markets were technologically interlinked. "Circuit breakers" were introduced to control the speed of price changes, spurring securities regulators to create mechanisms to facilitate cooperation. The foundations for the full interconnection of EU financial markets were being laid, including the Single European Act of 1986, the 1986 "big bang" financial liberalization process in the United Kingdom, and the 1992 Maastricht Treaty.

Advances in the mid-1990s underscored the initial risks of computerized risk management systems, as evidenced by the collapse of Long-Term Capital Management after the Asian and Russian financial crises of 1997-1998. But the next level of development continued with the provision of online consumer banking by Wells Fargo in 1995. The emergence of the internet in the 1990s provided the foundational change that made FinTech 3.0 possible a decade later. During FinTech 2.0, e-banking presented new risks for regulators. For one thing, electronic bank runs were a possibility because technology facilitated instant withdrawals. Regulators expected that e-banking providers would be authorized financial institutions-typically, the only entities allowed to describe themselves as "banks". But FinTech 3.0 called for a radical rethinking of that view.

- **FinTech 3.0**

Between 2007 and 2008, a confluence of factors provided the impetus for FinTech 3.0 in developed countries. The brand image of banks was severely shaken. A 2015 survey reported that Americans trusted technology firms far more than banks to handle their money. Today, the same phenomenon exists in China, where over 2,000 peer-to-peer (P2P) lending platforms initially emerged outside any established regulatory framework; and yet lenders and borrowers-because of lower costs, higher potential returns, and increased convenience-remain undeterred. The GFC damaged bank profitability and competitiveness, and the ensuing regulation drove compliance costs to record highs while simultaneously restricting credit. Requirements regarding ringfencing, the preparation of recovery and resolution plans, and the performance of stress testing only contributed to rising bank costs. The GFC further led to large-scale redundancies, leaving many professionals seeking to apply their skills to new outlets. The timing of the 2008 GFC also played a critical role in the story of FinTech's development. It is highly questionable whether FinTech 3.0 would have arisen post-crisis had the GFC occurred five years earlier: FinTech 3.0 has required high levels of smartphone penetration and genuine sophistication regarding application programming interfaces (APIs). Both technological developments were necessary to provide the consumer interfaces-and interoperability between services and applications-that have underpinned FinTech 3.0.

The key differentiating factors of FinTech 3.0 are the rapid rate of technology development and the changing identity of the providers of financial services. Startups and technology firms have challenged established financial institutions by offering specific, niche services to consumers, businesses, and incumbent financial institutions. FinTech 3.0 has been characterized by the rapid growth of companies from "too small to care" to "too large to ignore" to, finally, "too big to fail." Naturally, the primary regulatory approach in FinTech 2.0 was to concentrate regulatory efforts on systemically important institutions. However, today's

more fragmented landscape raises the important question for regulators of precisely when they should begin to focus on certain industry participants. This issue prompted Chinese regulatory authorities to reevaluate their own approach in 2015. It also highlights why the evolution of FinTech requires similar developments in RegTech. A flexible, multi-level approach should be implemented so that regulatory requirements are imposed with varying intensity depending on the size and risk of firms. Essentially, regulators will need to work closely with industry to understand changing market dynamics and to develop approaches that promote innovation while balancing risks and eliminating opportunities for regulatory arbitrage. The latter was manifested in the run-up to the GFC in the form of financial institutions shifting their activities to under regulated markets.

FinTech in Developed and Developing Economies

FinTech has expanded in scope, now covering the full spectrum of finance and financial services. It can be delineated into five key areas: finance and investment, internal operations and risk management, payments and infrastructure, data security and monetization, and consumer interfaces. A common image of FinTech is that of alternative financing mechanisms, such as P2P lending (facilitated by a platform). But FinTech also encompasses the integration of technology in such financial transactions as crowd funding and algorithmic trading. And FinTech plays a large role in institutions' internal operations, as evidenced by the high levels of spending that large financial institutions invest in enhancing their IT capabilities. For example, one-third of the current staff at Goldman Sachs are engineers, and 60% of the staff have STEM (science, technology, engineering, mathematics) backgrounds. FinTech is also being used by IT and telecommunications firms to disintermediate the trading and settlement of securities (and OTC derivatives).

Today, FinTech affects every area of the global financial system, with perhaps the most dramatic impact in China, where such technology firms as Alibaba, Baidu, and Tencent have transformed finance. China's inefficient banking infrastructure and high technology penetration make it a fertile ground for FinTech development. Emerging markets, particularly in Asia and Africa, have begun to experience what we characterize as FinTech 3.5, an era of strong FinTech development supported by deliberate government policy choices in pursuit of economic development. FinTech development in Africa has been led by telecommunications companies on the back of two factors: the rapid uptake of mobile telephones and the underdeveloped nature of banking services. Mobile money-the provision of basic transaction and savings services through e-money recorded on a mobile phone-has been particularly successful in Kenya and Tanzania. Mobile money has significantly spurred economic development by providing customers with a means to securely save and transfer funds, pay bills, and receive government payments. M-Pesa, launched in 2007, remains Africa's best-known success story. Within a period of five years, payments made via M-Pesa exceeded 43% of Kenya's GDP.

FinTech 3.5 is supported by (1) high penetration of mobile devices (especially with broadband internet access) among the young and technologically literate, (2) the growth of the middle class, (3) untapped market opportunities, (4) a lack of physical banking infrastructure, (5) consumers increasingly valuing convenience over trust, (6) low levels of competition, and (7) weaker data protection requirements. The spike in the number of graduates with engineering

and technology degrees in such economies as China and India has also played a role in planting FinTech firmly in the soil of those economies. This era, FinTech 4.0, will be characterized by increasing monetization of data and reliance on digital identity, which believe is the new frontier in terms of a future regulatory framework.

FinTech Lending Overcomes the Challenges of Conventional Lending

The aversion of traditional FIs to service apparently risky low income but credit-devoid segments has enabled new-age digital lenders leveraging cutting-edge technology and alternative credit assessment models to quickly fill the void and reach out to a wide customer base. With technological advances and a conducive policy environment, alternative lending as a service has caught the eye of consumers and investors alike. FinTech lenders have capitalized upon the needs and pain points of the consumers across the lending value chain for uncomplicated on-boarding/ KYC processes, prompt decision making and instant disbursements in a seamless, automated and personalized experience. Digital lending has significant advantages over traditional lending, with the potential to address prevalent credit-related challenges in India. One of the most distinguishable advantages of digital lending is speedier approval of credit. Credit evaluations and loan disbursements on digital platforms have visibly quicker turnaround times than traditional loans - particularly for small-ticket credits and advances, which are most common among new-to-credit borrowers. Some of the factors why the disbursement turnaround time is significantly lower in digital lending are replacement of manual form filing by digital data captures, automated evaluations leveraging on technologies like advanced analytics, artificial intelligence (AI) and machine learning (ML) and no or little in-person visits. Traditional credit scores consider repayment records, delinquency, data related to delay and default on outstanding loans to determine a credit score. This results in a majority of creditworthy thin-file individuals and businesses being unable to access credit. The usage of alternative data rather than traditional asset-based data to determine the creditworthiness of an individual/business is the underpinning advantage of FinTech lenders over traditional lenders. The shift from asset-based data to cashflow-based data and other surrogate data from sources such as telecom, utility and social media, combined with psychometric analysis to evaluate ability and willingness to pay, is augmenting or substituting traditional sources to service credit-invisible strata. Conceivably, another key advantage associated with digital alternative lending models is the operating cost efficacy. Traditional lending models, usually, have high overhead costs, surfacing from deeply entrenched manual processes. FinTech lending models, conversely, do not require physical branch networks, are asset-light and have technology-enabled operating and business models which require minimal human intervention, thus reducing manual operating costs. This model allows FinTech lenders to keep fixed costs nominal and aggregate a multitude of low-value loans, which enables them to serve low-ticket credit individuals in semi-urban and rural areas and previously credit-devoid MSMEs. Furthermore, FinTech lenders are also able to pass on the benefits of lower costs to customers, making their digital lending products more attractive.

Figure.4: Fintech Lending Addresses Limitations of Traditional Lending

<i>Conventional lending examples access to</i>		<i>Limitations of the limitations underserved markets</i>	<i>How FinTech lending overcomes</i>
Formal	Banks	Requirement for physical verification and high costs	Utilises digital footprint as a substitution for physical documents for verification and/or usage of third-party data (e.g. e-commerce) in order to define eligibility, which lowers operational costs compared to conventional lending.
	NBFCs		
	Multi-finance companies	The underwriting process requires a credit history or proof of a steady income or an asset-based collateral.	Processes the underwriting assessment through digital processing platform with various data points, to identify typical attributes for interest rates to be charged, without prior collateral.
	Cooperatives	Cooperatives are relatively small in size and lack of competitiveness to attract money suppliers in the market.	Developed a simple and convenient platform for attracting investment, as most of the processes are completed through digital platforms, which attracts large number of potential lenders.
Informal	Loan sharks	Risk of irrational credit and limited funding opportunities	Customized credit assessment models, which employ behavioral data to identify typical attributes for charging interest rates, supported by large amounts of funding from retail and institutional lenders.

The Major Drivers for Growth of FinTech and Alternative Lending:

- Strategic partnerships and collaborations between traditional financial institutions and new-age FinTechs
- Easy market entry and targeted loan offerings due to availability of large sets of customer data, which can give collective and individual insights
- Government initiatives like launching Credit Guarantee Fund Scheme for Micro and Small Enterprises (CGS), issuing guidelines to banks regarding collateral requirements and setting up Micro Units Development and Refinance Agency (MUDRA) banks which can provide loans at low interest rates to micro-finance institutions and NBFCs
- Better margins than other FinTech business models, such as payments and other financial services
- Changing consumer behaviour and expectations shaped by purchase/transaction experiences offered by e-marketplaces like food delivery, e-commerce and travel portals
- Affordable alternative lending practices can help FinTech leaders explore the huge untapped market for loans and bring in more inclusion; there is a need to 'sachetise' finance

- i.e. increase availability of small-ticket size products - to lift people out of poverty.

The FinTech lending market is forecasted to exhibit accelerated progress between 2019 and 2025 owing to factors such as growing increasing internet and smart phone penetration, the thrust from digitisation and regulatory reforms. Loan growth in India averaged 11.87% from 2012 until 2019. In FY17-18, total lending and deposits grew at a compound annual growth rate (CAGR) of 10.94% and 11.66% respectively. The fastest growing segment in the emerging markets is the retail credit market, which is the fourth largest. It accelerated to USD 281 billion from USD 181 billion between December 2014 and December 2017.

Industry Scenario

FinTech in India is expected to increase at a CAGR of 20.2% during 2017-21 to reach \$92 bn. The Fintech industry in India is categorised into 4 major segments namely WealthTech, Payments, Lending and InsureTech. The WealthTech Industry in India is witnessing the emergence of startups with innovative technologies and business models. Growing personal wealth, increased adoption of mobile & digital channels, reduced asymmetry of information between small & large financial institutions and investors, are some of the factors propelling the industry forward.

Digital payments have been the flag bearer of the Indian FinTech space. In 2010, India launched its first real-time payments systems 'IMPS' and introduced UPI in 2016. There are 375 Payment startups in the country. Mobile/digital wallets, gateways, POS/ mobile POS sub-segments account for over 50% of the payment startups in India. India will contribute 2.2% to the world's digital payments market by 2023, and the value of such transactions is expected to reach \$12.4 trillion globally by 2025. In consumer credit, the urban population is likely to leverage FinTech lending services to avoid heavy documentation, and the rural population (which is new to credit) can benefit from alternative credit scoring mechanisms to stay away from loan sharks. The scope of IoT in Indian Insurance goes beyond telematics and customer risk assessment. Currently, there are 110+ InsureTech start-ups operating in India.

Conclusion

Fintech use is higher in countries with a younger population, such as India, South Africa and Colombia, according to a Bank of International Settlements study. An earlier survey had found 91% of Indian respondents, 86% of Chinese respondents and 60% of US respondents would consider financial products from technology firms they already use, and that this interest is even higher among younger consumers (ages 18-34). However, in the past year or two, trust in technology firms may have declined due to some high-profile data breaches and scandals. Unmet demand for basic banking -- means of payment, and money transfer services -- is likely the key factor behind the rapid growth of mobile payments offerings in countries like India, which would continue to rise. New fintech providers have established a strong foothold in mobile payments, especially for retail customers. As one category of fintech, "techfin" or "big tech" players are increasingly important as payments providers in some countries, but not in others. For instance, big tech mobile payments made up 16% of GDP in China according to the most recent data, but less than 1% in India. In emerging markets, mobile payments are benefiting from the high share of consumers with mobile phones. Fintech investment in India increased manifold from USD 247 million in 2014 to more than USD 1.5

billion in 2015 . India has a far lesser number of angel investors (about 1,800 angel investors in 2016) as compared to 3, 00,000 in the U.S. However, India is witnessing increasing interest levels in start-up funding, which is evident by increasing number of angel deals from 370 in 2014 to 691 in 2015 . With the latest trend in commoditization of the financial services offerings and VCs dictating terms to numerous start-ups, the investment focus has tended towards the higher margin, consumer focused, product start-ups than low-margin service start-ups. Bengaluru has the highest number of start-ups and accelerators in the country, while Delhi is home to big-ticket players. Investors are coming to terms that fintech is more than just payments technology and investor interest is beginning to manifest itself in a variety of sub-segments such as investing, lending, wealth management, credit reporting among others. Traditionally and going forward, while Venture Capital firms have been early stage investors in fintech businesses, the global trend of banks and other financial institutions acquiring or investing in fintech start-ups is being witnessed in India as well. Additionally, they are developing platforms themselves for such start-ups to thrive, or are beginning to invest in such platforms.

References

- <https://thedigitalfifth.com/indian-lending-fintech-ecosystem>
- <https://thedigitalfifth.com/indian-fintech-ecosystem-four-eras-of-growth-and-contraction>
- <https://www.pwc.in/assets/pdfs/consulting/financial-services/fintech/publications/a-wider-circle-digital-lending-and-the-changing-landscape-of-financial-inclusion.pdf>
- <https://bfsi.economicstimes.indiatimes.com/news/fintech/eight-factors-that-will-drive-fintech-in-india-this-year/74167318>
- <https://assets.kpmg/content/dam/kpmg/pdf/2016/06/FinTech-new.pdf>
- <https://www.investindia.gov.in/sector/bfsi-fintech-financial-services>
- <https://www.cfainstitute.org/en/research/foundation/2017/fintech-and-regtech-in-a-nutshell-and-the-future-in-a-sandbox?s>
- <https://www.adb.org/sites/default/files/publication/502781/adbi-fintech-smes.pdf>
- https://www.researchgate.net/publication/324206556_Do_Fintech_Lenders_Penetrates_Areas_That_Are_Underserved_by_Traditional_Banks
- https://www.researchgate.net/publication/331491843_Fintech_and_Banking
- <https://www.fdic.gov/analysis/cfr/bank-research-conference/annual-17th/papers/14-jagtiani.pdf>
- <http://10000startups.com/frontend/images/Fintech-Lending-Unlocking-Untapped-Potential.pdf>
- <https://www.investopedia.com/terms/f/fintech.asp>
- <https://www.fintechcouncil.in/pdf/IAMAI-deloitte-fintech-report-july-10.pdf>
- <https://www.moneycontrol.com/news/business/personal-finance/know-your-rights-to-fend-off-recovery-bullies-unleashed-by-fintech-lenders-5427931.html>
- <http://mapegroup.com/pdf/fintech-india-changing-landscape-sme-lending.pdf>
- <https://snaq.co/reports/report-bancos-nas-midias-sociais>