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Digital Lending in Retail Business

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***Abstract*: With three billion people left out of or poorly served by the formal financial sector, digital lending represents a powerful new solution for helping to create a financially inclusive world and for creating a financial system that works for everyone. Considering how dynamic digital lending is, how quickly contributing and competing technologies arise, the unforeseen ways that those technologies interact with one another, and broader changes to regulations and economies, predicting what's next for digital lending is a difficult – if not impossible. This paper represents a broader insight of digital lending processes and its dynamics and its scope in India.**

***Keywords*: Digital Lending, Digital Loan, Retail Business, Online Retail Loans, Retail Loans, Quick Loans**

1. Introduction

Lending is simply the act of giving money on credit to another person called the borrower. The borrower repays the money to the lender with interest over a defined time-period. Digital lending attempts to perform each step of this process through paperless or electronic means. In other word, Digital lending can be defined as the use of online technology to originate process, disburse and renew loans in order to deliver faster and more efficient decisions.

2. Digital lending

A. Key Trends Supporting Digital Lending

Around the World, lending models in the last few years have seen frenetic activity. Initially, this wave was led by fintechs but a few traditional lenders have followed suit subsequently. The exponential growth in digital lending around the world has been enabled by four key trends:

- *The Internet Homo sapiens:* Consumers are becoming increasingly digitally savvy. They use ride-sharing apps to get to work, order lunch on their smart phones, stream movies and shop for clothes, groceries & vacations online. This stark change in buyers' behaviours and expectations means that many consumers no longer need physical interactions with sellers to purchase a product. In fact, interactions in the digital world are strongly influencing purchase decisions. Today, buyers rely on online consumer reviews, social media, internet videos and sellers' official websites to collect information, establish trust and make purchasing decisions. While the millennials have largely pioneered this approach, this kind of buying behavior is certainly no longer limited to them. The older generations including parents and even grandparents are catching up. Consumers often find traditional working hours and brick and mortar stores out of reach due to their long working hours and therefore seek a 24X7 sales and service window. With over 460 million internet users, India is the second largest online market, ranked only behind China. As per BCG estimate, by 2021, there will be about 635.8 million internet users in India. On average, an Indian subscriber consumed 7.4 GB of data per user per month on their mobile devices over mobile networks alone, placing India ahead of developed markets like the UK, South Korea and France. On an annual basis, Indians today do 340 billion online searches, view 810 billion web pages, watch 53 billion online videos, and make 300 million e-commerce transactions and 8 billion digital banking transactions. As per BCG research by 2023, the digital footprint of financial services consumers in India would increase to 75 percent (from current 50 percent). This is primarily due to explosion of smart phones as well as mobile internet.
- *Technological advances and big data:* Two-thirds of the world's population now has access to mobile services. The advent and advancement of smartphones has created a whole new world of economic activity available at one's fingertips. The surge in use of smartphones and the internet for a variety of purposes has created an abundant and continued supply of data. As devices from smart watches to electric cars connect to the internet, the volume of available data keeps increasing. For example, just the hourly transaction data of Walmart is 67 times bigger in volume than the total content contained in all books in the U.S. Library of Congress, the largest library in the world.
- In addition to the rapid rise of mobile enabled data, the other technological advancements aiding digital lending include advancement in biometric technology i.e. thumbprint, iris and now face recognition, instant payments, internet of things (IoT), Artificial Intelligence(AI), Machine learning, big data, wearables and blockchain. Each of these are playing a critical part in the lending supply chain i.e. biometrics in e-KYC and e-signatures, internet of things in underwriting, blockchain in underwriting as well as collateral / security valuation and instant payments for disbursements and repayments. This unprecedented amount of Indian consumer data being generated through web search, social media, e-commerce are leveraged by banks/FIs to reduce the cost of consumer acquisition,

Table 1
Digital lending models

Online Lender	FSPs that provide end-to-end digital lending products via a website or mobile application.
P2P Lender	Digital platforms that facilitate the provision of digital credit between many borrowers and lenders, typically playing an ongoing central role in the relationship between these parties.
e-Commerce and Social Platforms	Digital platforms wherein credit is not their core business, but that leverages their digital distribution, strong brand, and rich customer data to offer credit products to their customer base.
Marketplace Platforms	Digital platforms that originate and match one borrower with many lenders for an origination fee; the lender and borrower then enter into a bilateral agreement.
Supply Chain Lender	Non-cash digital loans for specific asset financing, invoice financing, or pay-as-you-go asset purchase within a supply chain or distribution network.
Mobile Money Lender	Partnership model wherein lenders work with mobile network operators (MNOs) to offer mobile money loans to their customer base, leveraging mobile phone data for scoring.
Tech-enabled Lender	Traditional FSPs that have digitized parts of the lending process, either in-house or through partnerships.

improve underwriting models and to establish early warning systems. With financial services increasingly moving in this direction, big data is likely to be one of the key pillars of the digital lending boom in India.

- *Enabling regulatory environment:* The Indian government has encouraged the emergence of new services by creating an open architecture for authentication and data access through India Stack (India Stack is a set of open Application programming interface (API's) readily available to developers). This new digital architecture can make presence-less, paperless and cashless delivery of services and consent-based sharing of data possible across the country. When it comes to digital lending, India has leapfrogged many advanced economies by setting up open architecture layers such as Aadhar, UPI, Bharat Bill Payment System and GST and pushing cashless transactions post demonetization, the government has been actively helping in the expansion of a robust digital ecosystem. Introduction of GST, Trade Receivables Electronic Discounting System (TReDS) an electronic platform to auction trade receivables, e-Marketplace (GeM) as a central online portal for procurement of all goods and services required by government departments, organizations and PSUs, RBI guidelines on Public Credit Registry (PCR), P2P Lending, Regulatory sandbox to encourage online financial-technology (fintech) innovations etc. These regulatory supports have enabled lenders to use digital identity and data sharing to accelerate consumer acquisition, underwriting etc. which further boosting the growth of digital Lending.

B. *Digital lending models*

Around the world, digital lending models are characterized by distinct market structures, regulatory environments, and customer needs. Some players offer end-to-end digital solutions, while others focus on a specific component of the lending process and leverage partnerships to supplement their models. Various forms of digital lending represented as in Table 1.

C. *Digital loan product type*

Regulations permitting, any loan (or, more broadly, any financial product) can be designed and delivered digitally. This includes loan products of all sizes, up to large SME loans or even mortgages, providing that willingness and capacity to pay can be assessed credibly with data from digital sources. Delivering different types of loan products digitally requires variations in product design, risk management, and credit methodology; it also affects sourcing data for acquisition and underwriting, and managing collections and customer engagement to ensure a risk-adjusted approach. It is important to differentiate between nano consumption loans (typically assessed on the basis of limited data, which consequently increases the risk premium) versus SME lending (which typically involves a more thorough assessment of the digital footprint of a potential customer). Some of these digital product variations are described in Table 2.

D. *The digital lending process*

The lending process refers to the sequence of activities a Financial Service Provider (FSP) performs to provide credit – from acquiring and onboarding a customer, to evaluating the customer and disbursing the loan, to receiving repayments and following up on past due loans. Throughout the lending process, the FSP builds customer engagement and loyalty through high-touch interactions that adapt to client needs and preferences. In its purest form, digital lending refers to the 'digitization' of the

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Table 2
Typical features of different types of digital lending products

PRODUCT	CREDIT ASSESSMENT	POTENTIAL ADDITIONAL DATA SOURCES	PENALTY OF NON-PAYMENT	IMPLICATIONS FOR DIGITAL LENDER	IMPLICATIONS FOR CUSTOMER
Short term, small value loans(e.g. nano)	Focused on willingness to pay–behavioral assessment	• Mobile phone data • Alternative data that can assist in assessing customer behavior • Bureau data (if available)	Future access •No further loans from provider • Blacklisting on bureau	•Engagement with customer must be supportive through repayment period to keep interest high and encourage repayment. • Non-paying loans of written off, or selective legal action may be taken to set precedent	• Often a fully digital experience, engagement with institution via online channels (SMS, mobile or web-based applications) • Need to provide access to personal data to support credit assessment
Longer term, larger value loans (e.g. MSME working capital, mortgages, etc.)	Focused on capacity to pay – proof of income and expenses and sufficient cash flow	'Digital footprint' of customer's monthly income, cash flow, and expenses (e.g. digital invoices, tax returns)	Immediate financial loss •Loss of collateral, access to inventory, etc. Future access • Blacklisting on bureau	• Thorough assessment of customer affordability upfront important • Non-payment often involves costly legal action to recover funds	• Application, disbursement, and repayment often via digital channels, evaluation may include some physical checks • Access limited for those lacking digitized records
Source: ACCION Insight					

lending process by introducing digital channels for acquisition, disbursement, repayment, and engagement and by leveraging digitized data and advanced algorithms for credit decisions, collections, and customer engagement.

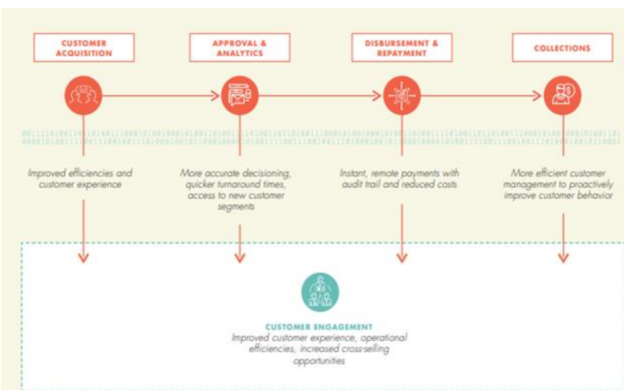

Fig. 1. Digital Lending Process (Source: ACCION Insight)

- *Customer acquisition:* Digital lenders may acquire customers using a mix of digital marketing tools and digital onboarding channels, enhanced by strategically designed physical touch points and referrals. Digital marketing tools include SMS blasts, search engine optimization, online banners, Secure Quick Response (SQR) codes, and social media advertising campaigns. Digital onboarding channels include USSD, SMS, and online applications via web or mobile platforms. However, remote onboarding can also be enabled by centralized call centers with human agents or AI driven chatbots. An important aspect of acquisition is the customer's identification; digital lenders commonly make use of innovations in digital identity and e-KYC (Know Your Customer) regulations to access government or private sector verified records, triangulating customer-entered information about their identity and eliminating the need for the customer to come to a physical location to submit KYC documents for verification. Digital acquisition channels increase efficiency and provide a rich source of digitized data that can be used to assess the customer and, in turn, offer a whole range of customized products. They also offer cost-effective ways to advertise and provide key product information to prospective clients, which can bolster transparency. Another option is to partner with a 'data-rich' third-party (like an MNO or e-commerce player) to leverage their customer databases. Indirect acquisition via partners provides an FSP with 'prequalified' customers. E.g. Capital Float is an online lender in India offering short term, flexible working capital loans for over 5,000 SMEs. They have partnered with more than six e-commerce platforms – including Amazon, e-Bay, Flipkart, and PayTM – to offer quick, customized, short-term credit directly to their online retailers
- *Approval & analytics:* At the heart of digital lending is the potential for lenders to access and use digital data to make quicker, automated, and more accurate underwriting decisions. Digital lenders use both conventional and alternative data sources and advanced algorithms and analytics to quickly and remotely 'score' potential clients and make credit decisions. Many lenders supplement self-asserted and independent bureau data with knowledge about the specific borrower collected in the past, as well as call data records, digital transactions (e.g. supplier payments, e-commerce payments, mobile money payments, etc.), and social media information to better understand individual behavior and expand access for 'thin file'15 customers that may have previously been rejected. Decisions are made in seconds by analyzing multiple data points (Figure:2) which lead to improving turn-around time and the customer experience, Example: Konfio is a Mexico-based online lending platform that provides loans to those who are

creditworthy but underrepresented in the current financial system by using a proprietary algorithm, which incorporates more than 5,000 data points into its web based platform, then triangulates this information into a single predictive measure of whether a prospective borrower will repay a loan. The five domains of traditional and innovative data sources the algorithm uses include: demographic data, social network data, psychological and psychometric profile data, transactional data, and lending history data. This information comes from a variety of sources including surveys, social media websites and transactional data from the government.

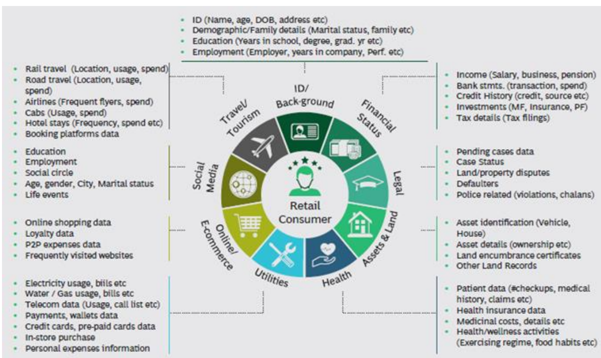

Fig. 2. Multiple Data Points of Customers (Source: BCG)

- *Disbursement & repayment:* Digital lenders disburse loans and collect repayments remotely through digital channels, such as bank accounts, e-commerce accounts, or mobile wallets. These cashless channels improve operational efficiency and reduce fraud by providing a clear audit trail. They also allow for rapid, sometimes instant, disbursement providing customers with access to their funds in a matter of seconds.
- *Collections:* Digital lenders leverage data and algorithms to support their collections process. Some deploy delinquency scorecards that track customer behavior and propose customized recovery strategies. Delinquent customers are blacklisted and lose access to future credit – which can be a powerful motivator. However, an effort to build financial capability into product design can help customers understand the long-lasting financial implications of a negative credit score. FSPs should integrate the content and delivery of educational messages into digital product design and rollout to minimize their collections burden and the negative repercussions for customers. One tactic is to create short educational videos that explain key messages on repayment, which field staff can show to customers on their phones or tablets.
- *Customer engagement:* Digital lenders use digital channels and customer data to build an intuitive, convenient, and customized customer experience throughout the lending process. This involves both outbound (lender to customer) and inbounds (customer to lender) communication and account management. Lenders send customized communications, reminders, and product offers based on customer behavior, and customers are empowered to easily access and manage their accounts, raise questions, or report issues or complaints. Channels can range from simple SMS, call center support, or Interactive Voice Response (IVR) systems, to the use of self-service online portals, chatbots, and in-app messaging. At the heart of this is a lender's desire to understand a customer's individual behavior and preferences, quickly address their problems or concerns, and create solutions that make sense to the customer on a personal basis. In order to ensure a long-lasting, high-quality relationship between the FSP and the client, it is important to protect the client through responsible lending practices, for example, by giving simple explanations of the terms and conditions during acquisition, explaining the consequences of not making repayments on time when disbursing the loan, and ensuring accessibility of channels to address customer complaints.
- *Example:* Tala is an online lender in Kenya offering mobile-based nano loans via an Android application. After customers opt-in, Tala's proprietary algorithm scrapes approximately 10,000 data points from the phone (including SMS, call records, locational data, etc.) to analyze and score customers. Tala's customer engagement is completely digital – there are no physical branches or any in-person engagement. However, Tala's customer engagement leverages customer data to provide a personalized financial experience via a sophisticated mobile application and through social media channels like Facebook. Through the app, customers can manage all aspects of their account, including checking balances, making payments, or accessing support through an in-app messenger which promises a response within 24 hours. They can also track their customized 'Tala credit score', set financial goals, and use personal financial management tools. To achieve a complete digital end-to- end delivery and engagement FSP need to build capabilities in each stages of this digital journey or may partner with companies (fintechs) who can provide these capabilities to leverages the digital ecosystem. The possible area of partnership and the potential benefits with examples are illustrated as in Table 3.

3. Factors that will shape the future of digital lending in India

As per BCG estimate that the total retail loans which could be disbursed digitally in the next 5 years could be over $1 trillion. Annual digital disbursements 5 years hence would be nearly 5X that of current levels (Fig. 3 & 4) . Following factors will define digital lending landscape in India in the coming years.

- *Rising Consumer Market:* With rising affluence levels and a burgeoning middle class with higher disposable incomes,

Table 3
Potential partners for digital lending

	CUSTOMER ACQUISITION	APPROVAL & ANALYTICS	DISBURSEMENT & REPAYMENT	COLLECTIONS	CUSTOMER ENGAGEMENT
POTENTIAL PARTNERS	• MNOs • Agency networks • E-Commerce platforms • •Supply chain distributors • Payments businesses • Retailers/FMCGs	• Alternative data scorers • Digital lenders with advanced scoring capabilities • Psychometric assessment service providers	• Agency networks • Digital wallets • MNOs •Payment aggregators	•Specialty collections companies • Score providers •Suppliers to applicant e.g. wholesalers to retailers	•E-Commerce platforms •Social platforms and applications •Third-party call centers •Marketing specialists •Customer engagement platforms
BENEFITS	• Lower cost of acquisition– access to 'prequalified' segments • Digitization of application data •Enhanced and simplified customer experience	• Advanced, highly specialized analytics that would be difficult to develop in house • Opportunity to leverage additional data sources through fintech partnerships • Can decrease time to market for digital products	•Lower cost channels – leverage existing networks •Relieves pressure on branch network, promotes rural business •Quickly drives operational efficiencies	• Reduced labor for collections – focused efforts •More effective collections strategy	•Leverage social features to improve customer experience • Drive increased remote account management •Helps cross-selling opportunities
EXAMPLE	Capital Float is partnering with Flipkart in India for customer acquisition	FINCA is partnering with First Access for support in data maintenance and scoring	M-Shwari loans are underwritten by CBA but disbursed and repaid via Safaricom's M-PESA mobile money	True Accord operates a data-driven debt collection platform powered by machine learning and customized digital first communications	Loan Frame offers a blog and loan counseling to SMEs that it then connects to partner lenders

Source: ACCION Insight

demand for retail credit is expected to be robust in the coming years driven by consumption growth across sectors like housing, automobiles and white goods. Increase of digital footprint and digital influence will expand the digital lending market.

- *Non-traditional companies with access to consumers will challenge incumbents:* Given the low penetration of credit in India several non-financial services companies have entered the lending space over the last few years. Non-traditional companies that have a strong brand, large consumer base as well as a strong distribution network will attack the lending market through innovative digital lending models. (e.g. Flipkart, Airtel, Paytm, MobiKwik etc.)
- *New age fintechs will continue to innovate:* Traditionally financial services providers have built large, multi-layered organizations that result in complexity and inefficiency. New age fintechs, with their lean organization and innovative operating models, will continue to offer agile and cutting edge products that will address current consumer pain points while availing loan. (e.g. Capitalfloat, Lending Kart, Neo growth provide digitally enabled, seamless loans to commercial borrowers while Faircent and World of Lending run a P2P marketplace for individual loans. Bankbazaar and Paisabazaar have set up lending marketplaces, while CreditMantri and Credit Vidya provide a credit-scoring platform.). It is only fair to expect this space to proliferate and many more fintechs to come up with innovative models to participate in the lending ecosystem in the country.
- *Data and analytics will disrupt the lending value chain:* Digitization of various databases and records has resulted in multi-fold increase in data of individuals and corporations being digitally available. With the consent layer of the India Stack being triggered, there would be both a proliferation as well as democratisation of data. Big data will grow bigger as more consumers come online and discovery, research, transactions and consumer services move online. This will enable lenders to take better-informed underwriting decisions, offer personalized and customized solutions to consumers and drive higher consumer engagement and hence better consumer satisfaction.
- *Technology will change the face of the front end consumer experience:* Technological advancements will disrupt how consumers research and apply for a loan, as well as the on boarding experience. It will make the entire experience more intuitive, seamless and convenient. Some upcoming technologies can even disintermediate the channels that consumers rely on today for research, application or servicing. The focus of digitization will shift from moving processes online, to offering a seamless, simplified consumer-centric experience. For example, voice AI and smart assistants will become a significant channel for product and brand discovery. The market for smart voice assistants has been burgeoning with Amazon's Echo, Google's assistant and Apple's Siri in the fray.
- *Data and automation, linked with data explosion, will revolutionize underwriting, providing an option to offer credit to all:* Data explosion will give an impetus to the creation of big-data driven algorithmic lending models that will likely return a decision in minutes. Furthermore, these

models will be self-learning, tuning themselves basis data from connected collections and payment systems. Such data-based automated underwriting will enable hitherto underserved / unserved segments to be served.

- *Technological advancements will enable full scale digitization of operations:* Technologies such as biometrics enabled authentication, e-signatures, e-mandates, AI, machine learning and blockchain will enable 'zero human touch' lending and monitoring. Several back offices (as well as many mid office) roles will become redundant in the near future. Instant digital payments will continue to drive real time disbursements and improve collections.
- *Partnerships will fill capability gaps:* In order to build the new digital capabilities required to redefine consumer lending journeys and expand the scope of credit to those previously underserved, lenders will forge partnerships and collaborations with credit bureaus, fintechs, technology companies, alternate data providers and third party processors. Multiple new fintechs in the arena of credit scoring i.e. Experian, Equifax etc.; digital income assessment using bank statement analysis e.g. Perfios; eSign e.g. eSignDesk, Digio etc.; property valuation e.g., Propequity; automated bank statement analysis provided by Yodlee and Jocata etc.; financials and business information provided by Probe, CMIE etc.; trade credit information from Vayana; IndiaMart and KredX etc. are gaining credibility and expanding the scope of straight through processing in digital lending by digitizing more of the steps to sanction. In the MSME space, companies such as Indifi, Cointribe, ZipLoan and ePayLater are building on algorithm based lending. This is driven by multiple data points such as export and import data from Dun & Bradstreet etc. and industry specific data e.g., crop data from CropIn. By partnering with some of these entities, banks and NBFCs can acquire the capabilities required to offer an end-to-end digital lending experience to their borrowers.
- *The lending organization will transform with dramatic shift in power bases:* Finally, the increase in the extent of digitization and automation will mean a shift in the power bases within the organization. As processes and underwriting become more automated, the 'importance' of erstwhile power centers like operations and credit will go down. Technology and data will emerge as the new power centers in the organization. This will imply that lenders will have to create a digital-ready organization, focus on re-skilling of their people and build the right mindset and culture in the organization
- *Digital Lending in India:* As per an estimate by BCG analysis, the total value of digital lending business in the country will exceed $1 trillion over the next five years. This growth forecast is based on estimating the progression on the underlying drivers as shown in Fig. 3 & 4.

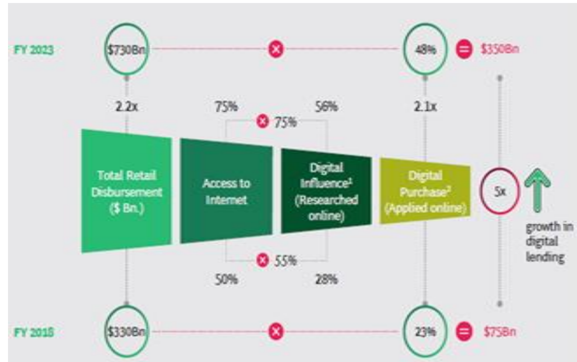

Fig. 3. Growth in Digital Loan Purchase in next five years (Source: BCG)

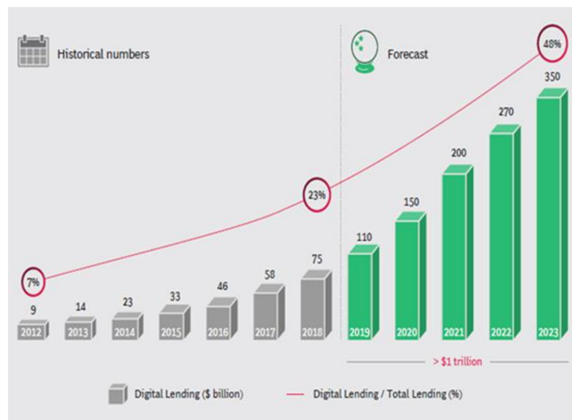

Fig. 4. Digital Lending Forecast, CIBIL, BCG Google digital Survey, 2018, BCG Analysis

4. Conclusion

The digital lending tsunami is for real, and the opportunity is here and now. According to Juniper Research, by 2021, half of all adults worldwide will use a smartphone, tablet, PC or smartwatch to access financial services. Digital lending will continue to grow as customers flock to financial institutions that can offer faster, secure, omnichannel digital services. It is the lenders' ability and agility to execute and transform rapidly with the changing business environment will define its leadership in digital lending space.

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