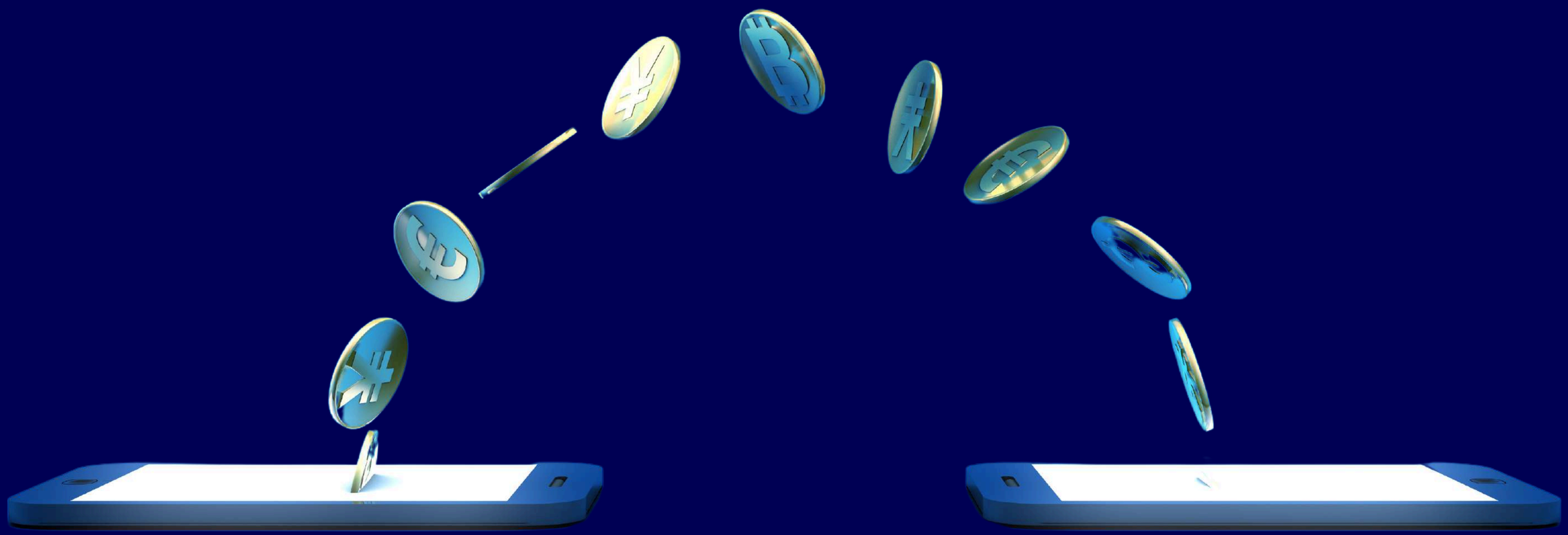
Eximius Ventures

NAVIGATING CREDIT

A THESIS ON INDIAN LENDING INFRASTRUCTURE



LENDING INFRASTRUCTURE & ENABLERS

The lending infrastructure includes SaaS/Tech platforms for end-to-end loan underwriting and collections management. Core systems manage workflows, while data providers supply data to these workflows.

Core Platforms

LOS	LMS	Co-Lending Platforms	Credit Card Management Systems	FRM/Collections
LendingPad, lentra, finflux By M2P, VEEFIN	Margill, TurnKey Lender, finflux, LoanPro	Yubi, CredFlow, DVARA Holdings	vegapay, FALCON, 42CS, fiserv., TSYS	DPDzero, Credgenics, spocto X, icanpe
LOS helps lenders in managing the entire process of loan application, approval, and disbursal.	LMS cover processes including loan servicing, reporting, customer care, syndication and customer monitoring.	Centralised infrastructure supporting end-to-end digital lending processes, including origination, underwriting, servicing, and portfolio management for banks and NBFCs to lend together.	A Credit Card Management System (CCMS) is software designed to oversee and manage the entire lifecycle of a card. It typically includes automated business rules to streamline card management processes.	Systems for Financial Risk Management and delinquency recovery, automating risk assessment, monitoring, and debt collection workflows.

Data Providers

Alternate Data Platforms	Embedded Finance Platforms	Banking Data	Credit Bureau	KYC / AML / Risk Management
CREDITVIDYA, SCIENAPTIC, CREDITMANTRI, SATSURE	FinBox, BharatX, RUPIFI, FinStack, ASCEND CAPITAL	fego, Perfios, saafe, Finarkein Analytics, CAMSfinserv	TransUnion, EQUIFAX, experian, CRIF	Cygnet Infotech, karza TECHNOLOGIES, FINTELLE, BioCatch, digio
Companies that offer non-traditional or unconventional sources of data for assessing creditworthiness and making lending decisions.	Embedded finance platforms integrate banking services within non-financial apps and websites for seamless financial transactions and services directly within user experiences.	Banking data providers and account aggregators drive lending decisions through advanced analytics, open banking, and API integration for seamless financial insights	Credit Bureau use AI and Big Data enhance credit scoring and report analysis for precise, efficient lender decisions.	KYC and AML compliance through API solutions, including Video-KYC, meeting evolving regulatory standards.

Source: Digital Fifth Report

1.1 LOAN ORIGINATION SYSTEM (LOS)

LOS is a software platform that helps lenders in managing the entire process of loan application, approval, and disbursal. It automates tasks such as data collection, document verification, underwriting, compliance, and workflow management.

Process of Lending

Data Collection	The process begins with creating the lender's profile. Previously done through physical interviews, it's now conducted virtually via dedicated portals. Modern solutions integrate with modular data portals like account aggregators to gather essential customer information directly.
Data Verification	The verification process was usually done through interviews, background checks, document verification, etc. Current solutions can directly interface with UIDAI, account aggregators, NSDL, etc. to authenticate information in real-time. Thus, this process can be entirely automated.
Underwriting	Traditional solutions focus on financial and bank statements, while modern systems utilise a wide range of data points for a clearer assessment of creditworthiness and collateral value. Real-time analysis through frameworks like account aggregators refines this process.
Collection	Collections involved the lender using field agents to solicit the loan. The process also had a high degree of opacity. With the rise of digital payments, banks can utilise frameworks like eNach and auto UPI to automatically collect payments from the borrowers's accounts. LOS has plug-ins for this.
Compliance	Before LOS solutions, banks had to manage a vast physical document repository, making auditability and data tracking challenging. LOS solutions simplify data storage and tracking, enabling comprehensive monitoring of operations aligned with regulatory guidelines.

Evolution of LOS

Pre 2010

- Monolithic systems, challenging to integrate, support multiple apps with separate server-based storage.
- They entail setup fees, maintenance costs, and long implementation times, requiring skilled security personnel.
- Manual credit assessment results in processing times of 15-30 days.
- Regulatory reporting is manually filed using data warehouses, used by both public and private sector banks.

2010-2015

- Monolithic and tightly coupled systems offer medium integration difficulty, don't support multiple apps, and feature server-based data storage.
- They involve a one-time setup fee, annual maintenance costs, and medium implementation times, requiring security expertise.
- Manual credit assessment leads to processing times of 7-10 days, with regulatory reporting manually filed using data warehouses.

Post 2015

- Featuring an open system architecture and auto-scalability, this system offers low integration difficulty, cloud-based data storage, and flexible payment options.
- It ensures quick implementation, enhanced security, and streamlined credit assessment with processing times of 1-3 days.
- Automated regulatory reporting makes it suitable for banks, NBFCs, and fintech companies.

Key Loan Origination Systems

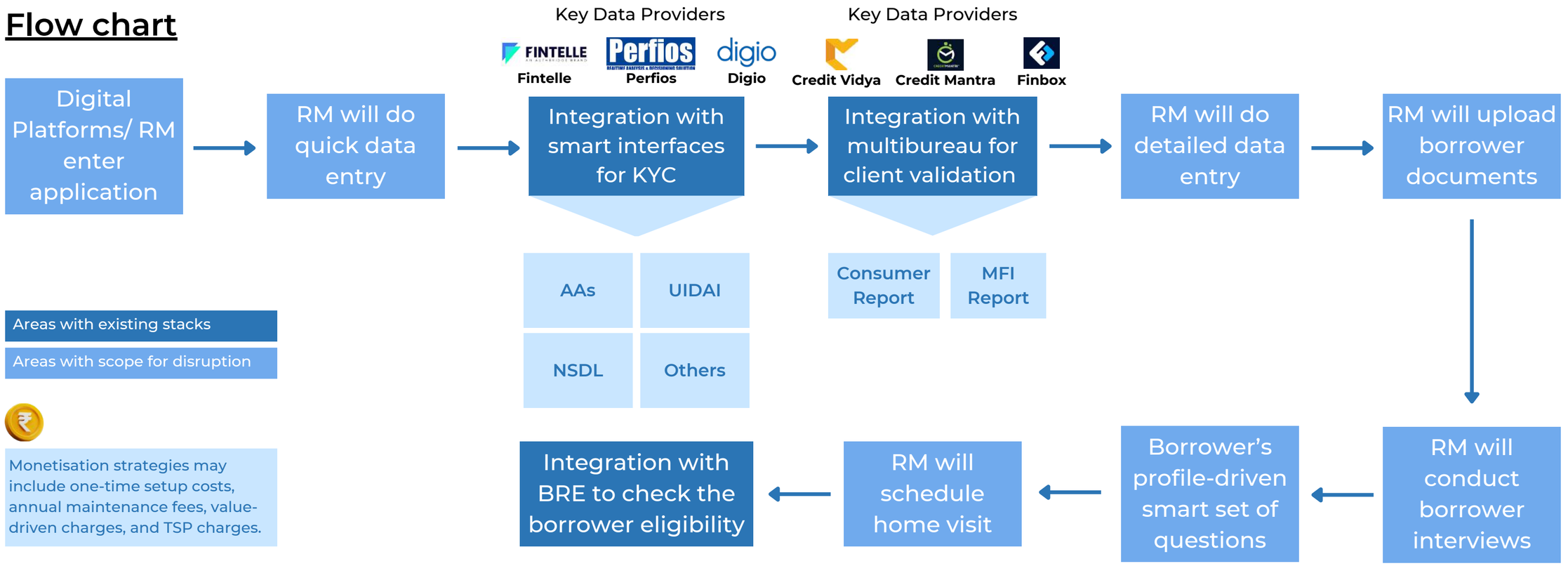
Wipro (NetOxygen LOS)	TCS (BaNCS)	Lentra	Lendingpad	Finflux	Veefin
Streamlines with automation for faster processing, reduced costs, and improved user experience.	Digitizes wholesale and commercial credit and loan origination end-to-end from sourcing to risk management.	Its API-driven modular architecture empowers banks and NBFCs to create custom loan products and enhance user experiences.	A web-based, end-to-end LOS for residential mortgage lending.	Finflux offers a centralized lead generation platform all the way to seamless CART & CRAM analyses.	Veefin uses extensive integrations, AI-powered credit scoring, and robust data accessibility to serve as an end-to-end tool.

Source: Varanium Nexgen, Digital Fifth

1.2 MODULAR LOS SOLUTIONS

With rapid evolution, LOS solutions are now far more adaptive. They cannot only service a large part of the lending workflow through in-built systems, but can interact with external data providers real-time to add more precision to the process.

Flow chart



Key Data Providers

Credit Vidya	Uses alternative data with AI algorithms to enable customer profiling and underwriting for new-to-credit customers.
Perfios	Perfios onboards users better using a comprehensive KYC suite and underwrites better by analysing their financial statements.
Finarkein Analytics	Finarkein assists in customer profiling and underwriting by providing lenders access to real-time data on AA.
Glib	Glib analyses financials statements, verifies customer income information, and analyses spending patterns to aid the lender.
Finbox	Finbox solicits customer data from multiple sources to aid in customer profiling, underwriting, and real-time risk management.

Generative AI Use Cases Across Work Flow

- Gen AI automates data collection effectively, particularly through conversational bots, streamlining initial customer interactions.
- It enhances eKYC, speeding up processes while maintaining precision, and automates interviews seamlessly.
- Gen AI decrypts unstructured banking data, simplifying synthesis and interfacing with frameworks like account aggregators for additional data points, facilitating underwriting across asset classes.
- It tracks borrower behaviour for real-time repayment evaluations, improving transparency with automated reminders.
- For compliance, Gen AI solutions serve as comprehensive documentation repositories, ensuring real-time evaluation and transparency.

Source: Expert Interviews

1.3 LOAN ORIGINATION METHODOLOGY

Comprehensive loan origination systems must integrate various factors and data points for effective underwriting, with distinctions between secured and unsecured lending workflows.

Key Parameters to Consider

Credit History Analysis

These filters refine lead quality for lenders. The 5C framework, highlighted below, is a popular tool:

1. **Character:** Evaluate reputation using references, credit history, etc.
2. **Capacity:** Determine repayment capacity through cash flow, DTI ratio, etc.
3. **Collateral:** Verify adequate assets or security against loans.
4. **Capital:** Assess financial health using statements, outstanding invoices, etc.
5. **Conditions:** Consider socio-economic factors impacting repayment ability.

Credit Risk Analysis

The purpose of credit risk analysis is to analyse the risk factors and minimise losses due to defaults. The computation of credit risk considers the below factors.

1. **Default Probability:** Calculated using similar loans over a definite period and the % of defaults.
2. **Exposure:** It is the amount borrowed by the debtor plus interest payments.
3. **Loss Rate:** It is the lender's projected loss in the event that a borrower triggers an event of default.

Assess Intention to Repay

Lenders try to figure out a person's intentions through personal conversations and document verification. They would consider their cultural makeup and values in their decision to lend.

1. **Interviews:** Lenders interview customers to analyse their behaviour and personalities.
2. **KYC:** A thorough process of analysing and verifying the borrower's details is undertaken.
3. **Psychometrics:** Psychometric tests are standardised assessments that measure personality traits and behaviour patterns.

Secured Lending

- Secured lending relies on assets equal to or exceeding the loan value, ensuring easier disbursement and lower interest rates due to the asset's security.
- Special workflows are required for secured loans, particularly for digitising various asset classes. While digital assets like mutual funds are manageable, physical assets like gold pose challenges, necessitating tailored workflows.

Unsecured Lending

- Unsecured loans rely solely on borrower creditworthiness without collateral, leading to higher interest rates; lenders assess various data points for repayment evaluation.
- Unsecured loans rely on customer-provided information and digital data, facilitating easy digitisation of workflows. Lenders collaborate with various data portals and verification providers for comprehensive coverage.

Key Metrics Analysed

Pull-Through Rate
The pull-through rate indicates workflow efficiency, application quality, customer service, interest rate competitiveness, and customer profile alignment.

Application Approval Rate
This metric sheds light on the quality of the client acquisition and the efficiency of the overall loan application workflow.

Cost Per Unit Originated
Cost per unit originated is a great metric for evaluating the operational efficiency of your loan prospecting by measuring against business expenses.

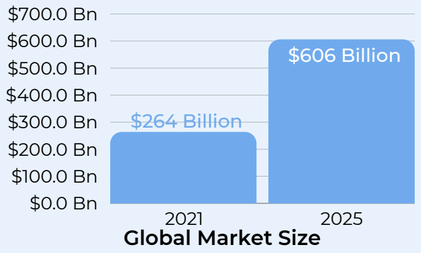
Abandonment Rate
This metric highlights interest rate competitiveness and the lender's ability to close leads.

Source: Expert Interviews

1.4 TRENDS IN LOAN ORIGINATION

With a more open data ecosystem, deeper partnerships, and cutting-edge technology, the loan origination process is becoming far more expansive. This has enabled lenders to find larger audiences and serve with higher precision and efficiency.

Embedded Financing



Global Market Size

Indian Market Size

What Does It Mean?

Simply put, embedded finance is the integration of financial services into traditionally non-financial offerings to attract new customers. This can take the form of BNPL (Buy Now Pay Later), point-of-sale financing, etc.

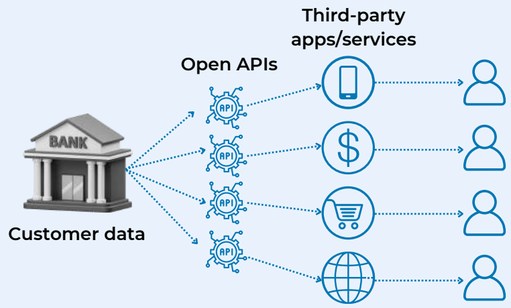
How Does It Benefit Lenders?

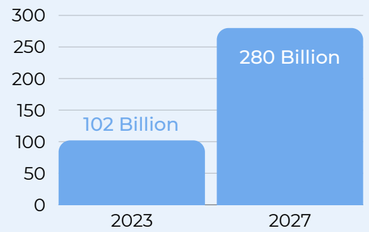
Embedded finance benefits lenders by expanding their customer base through convenient, targeted financial products while streamlining operations and reducing costs through partnerships.

What Is The Growth Opportunity?

In India, 60% of consumers are keen to avail of embedded financing solutions which has led major platforms like Amazon, Flipkart, etc, to adopt modalities like BNPL in their platforms.

AA and Open Banking





Number of Open Banking API Calls Globally

What Does It Mean?

Open Banking unlocks financial data with the user's permission to allow secure sharing with regulated third-party providers. Account aggregators (AA) act as an intermediary by collecting data that hold the customers' financial data and share that with lenders.

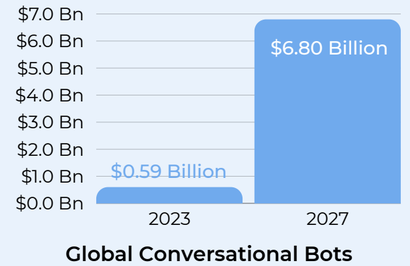
How Does It Benefit Lenders?

Open Banking benefits by offering precise user data more accurate credit assessments. This leads to reduced risk and personalised loan offerings which can attract new customers and improve profitability.

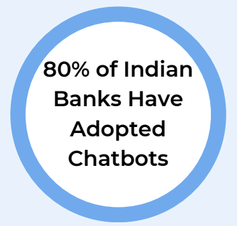
What Is The Growth Opportunity?

In India, the number of successful open banking payments increased by 130% between 2022-2023. Further, 14 AAs operate with a NBFC-AA license.

Gen AI- Powered Conversational Bots



Global Conversational Bots Market in BFSI



What Does It Mean?

These are AI assistants that engage potential borrowers for qualifying leads and pre-filling application while gathering key information to streamline the process and assess them. The injunction of generative AI will make these conversations more authentic for customers.

How Does It Benefit Lenders?

Conversational bots benefit by capturing more qualified leads 24/7 and automating key steps in the process. This translates to increased loan applications, faster processing times, and lower operational costs.

What Is The Growth Opportunity?

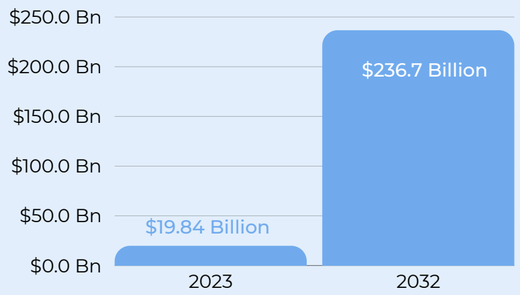
While this market grows at an 84% CAGR globally (Statista), 80% of banks have adopted them in India.

Source: IBEF, EY, Statista, RBI

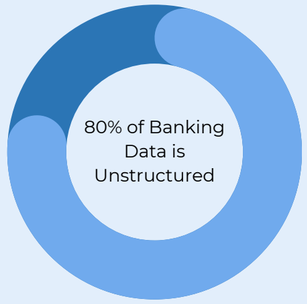
1.5 WHITESPACES IN LOAN ORIGINATION

To unlock the potential of this market, lenders need to not only make use of new technologies and serve new audience bases better, but also look to develop new solutions that can make use of these tailwinds to become large outcomes.

AI-Led Customer Profiling



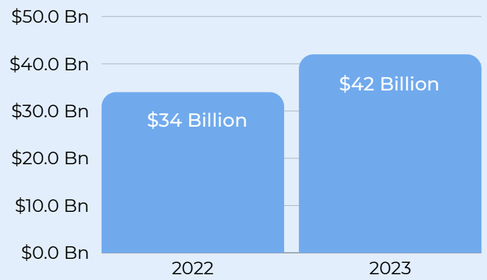
Global Market for AI in Banking



Growth Opportunity

As lending institutions would look to optimise their application approval rate and CAC specifically, they would look to integrate AI modules into their screening and prospecting tools. This will allow them to source user profiles that match their thesis and evaluate them more comprehensively and quickly.

Microfinancing

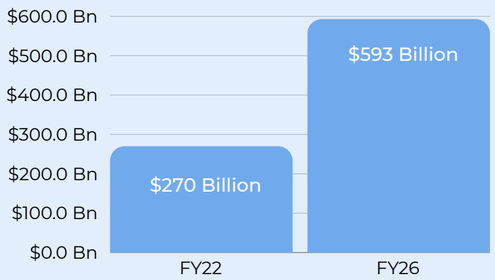


Total Microfinancing Portfolio India

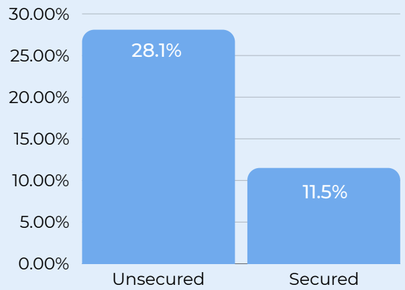
Growth Opportunity

For a lot of new-to-credit customers, microfinancing can be their first encounter with a lender. With over 66 million unique borrowers in this category, this is a lucrative market for lenders. Having a suite of comprehensive microfinancing offerings can enable lenders to acquire new users early in their lifecycle and retain them as loyal borrowers.

Secured Lending Profiling in Different Asset Classes



Digital Lending Market Size India

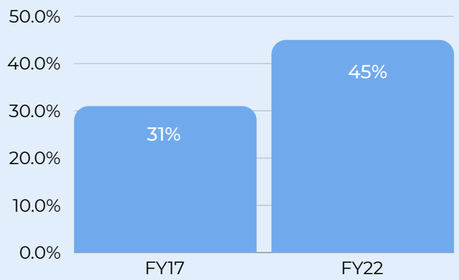


Growth Rate in 2023

Growth Opportunity

Digital lending is one of the fastest growing markets in India. While unsecured has been the greatest beneficiary of this, growth in secured lending has been slower due to difficulty in building workflows for different asset classes. Gen AI can be a big help in this.

Customised Modules for New-To-Credit Segment



Growth of NTC Customers in the 18-30 Age Group

Growth Opportunity

With the rise of digital lending and the democratisation of user data, we have seen significant growth in the new-to-credit segment, particularly amongst Gen Zs. To familiarise them with the ecosystem, it is important to create new modules catered towards them.

Source: Polaris Research, Fintech Futures, IBEF, PIB, Statista, RBI, MFIN

2.1 LOAN MANAGEMENT SYSTEM (LMS)

A Loan Management System empowers lenders by automating and streamlining the entire loan life cycle. LMS systems cover various processes including loan servicing, reporting, customer care, syndication and customer monitoring.

Processes LMS Solutions Serve

Application Processing	After the loan has been underwritten by the lender, the data of the application is fed to the LMS. This results in the creation of the borrower's profile and other important information in the platform which acts as a centralized server.
Loan Servicing	These systems help lenders perform complex computations on taxations, interest rates, track monthly repayments, generate monthly statements, and more. Modern LMS solutions can empower lending operations covering different types of loans.
Debt Collections	LMS platforms enable lenders to track repayments, overdue amounts, and late fees. They can also check borrower history and arrange for new payment terms. They also aid relationship managers and other staff in reviewing team-to-borrower communication throughout the customer journey.
Portfolio Management	These systems enable comprehensive reporting through incisive and personalized analytics tools that help lenders gain valuable insights into their loan portfolio's performance, delinquency rates, and profitability. These insights support data-driven decision-making.
Reporting	LMS platforms also automate the storage of important documents for compliance and taxation purposes. They also tend to provide cloud-based storage options that make for easier auditing and document retrieval.

Evolution of LMS

API-Driven Architecture	Automated Processes	Digital Banking Enabled	Co-Lending Frameworks	Deferred Collections
While the preceding technology tended to be quite monolithic, newer solutions, especially after the pandemic, focus on providing a modular stack of integrations that allow lenders to customize their software. With cloud computing, they have become more efficient.	While earlier LMS solutions were capable of maintaining an oversight over the different lending operations, manpower was still needed to execute certain tasks. Newer LMS solutions are capable of robotic process automation (RPA) which can process mortgages and other loans 80% faster.	India, formerly reliant on cash transactions, swiftly transitioned to digital payments post-pandemic, recording over 100 billion UPI transactions in 2023. LMS portals were revamped to facilitate digital banking, ensuring a seamless process for customers.	In FY23, India's bank co-lending portfolio reached $3.04 billion, quadrupling from FY22. With the surge in digital lending and fintechs, LMS solutions adapted to handle their workflows, including splitting loan servicing across multiple entities.	With the rise of digital-native borrowers and business models like BNPL, LMS solutions have had to become more flexible to allow the structuring of more relaxed collection plans. This can allow lenders to attract the new-to-credit (NTC) market as well.

Key Loan Management Systems

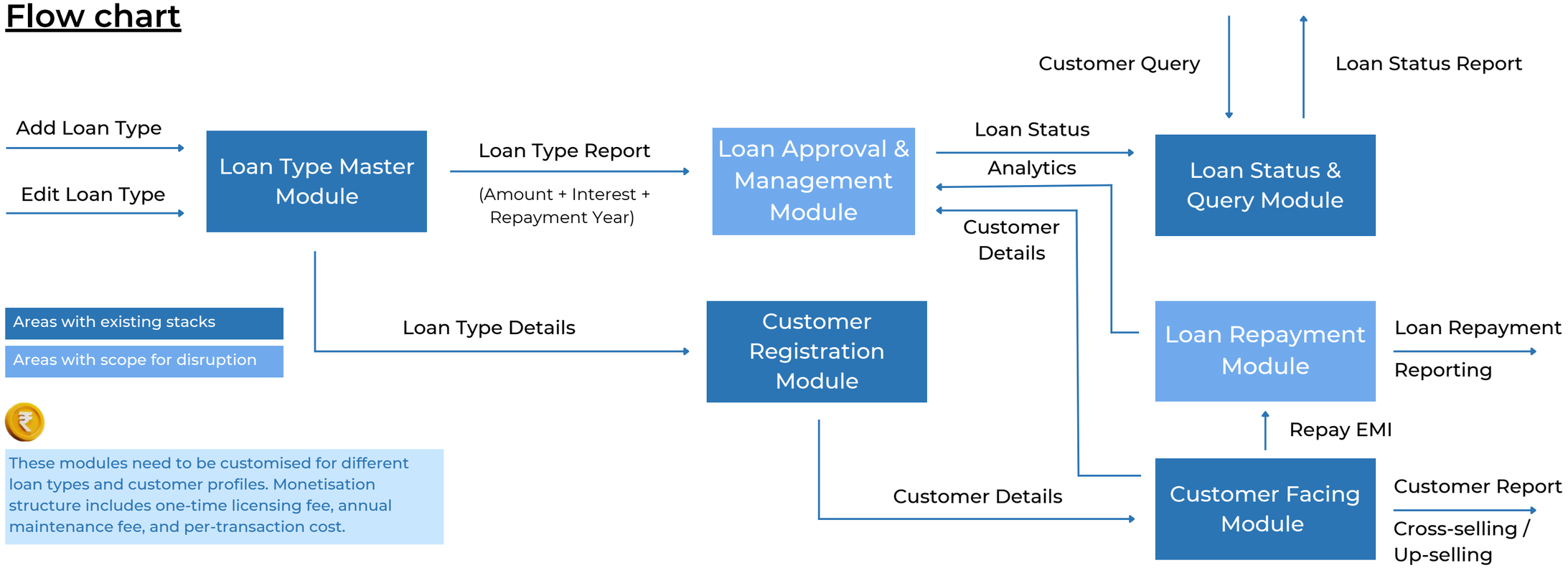
Margrill	Cloudbankin	Finnone Neo	LoanPro	Finflux	TurnKey Lender
A cloud-based solution, which assists lenders with servicing multiple loan types with support for automation and complex computations.	Offers easily configurable modules-driven solution for all types of loans allowing lenders to manage their portfolio in just a single platform.	An end-to-end lending suite that digitizes the complete lending lifecycle with smarter and faster credit decisions driven by 460+ APIs.	Increase operational efficiency, simplify the loan lifecycle, and create any number of loan types using one comprehensive LMS platform.	Allows lenders to design customised lending products, leverage an API-driven architecture to collaborate and remain compliant with guidelines.	Automate all elements of the loan cycle from loan application, underwriting, servicing and collection to reporting using a customisable solution.

Source: 1rivet, Recordpay, Economic Times

2.2 MODULAR LMS SOLUTIONS

With greater modularity and an API-drive architecture, LMS can be tailor-made to fit the lender's needs. The introduction of generative AI can amplify their abilities considerably. With the rise of co-lending and the new FLDG guidelines, these solutions will need to be more comprehensive to accommodate multiple parties and types of loans.

Flow chart



These modules need to be customised for different loan types and customer profiles. Monetisation structure includes one-time licensing fee, annual maintenance fee, and per-transaction cost.

Key Data Providers

Credit Mantri	Credit Mantri enables lenders to have greater insight into borrowers by leveraging the power of alternate data.
IDfy	Idfy mitigates the risk of fraud using tech-powered products and solutions for KYC, and digital onboarding.
Decentro	Decentro offers white-label solutions for payments, seamless KYC, and AI-powered compliant debt collections for lenders.
PiChain	PiChain uses AI and blockchain along with deep domain expertise to ensure sustainable compliance management.
Razorpay	Razorpay is India's first full-stack financial solutions company which can be leveraged by lenders for building a digital repayment stack.

Generative AI Use Cases Across Work Flow

- Generative AI could be used by lenders alongside account aggregators (AAs) for tracking other loan products availed by users in the market and create a comprehensive customer profile.
- The technology can also be used to create synthetic data sets that simulate various economic scenarios for stress-testing the portfolio for adverse situations.
- Generative AI can analyse borrower behaviour and identify an increased risk of delinquency which can be pivotal in risk management and creating more flexible repayment plans for those borrowers.
- AI can also automatically segment the portfolio into cohorts based on risk profiles which makes performance monitoring more intuitive for lenders.

Source: Expert Interviews, Antino

2.3 LOAN MANAGEMENT LANDSCAPE

As the effectiveness of LMS solutions has increased, so has the requirements from lenders. With new-age solutions, lenders look for comprehensive solutions which can offer greater flexibility.

Key Checkboxes for LMS Modules

Loan Servicing

- ☑ Collateral Registry
- ☑ Collateral Valuation
- ☑ Amortization Schedules
- ☑ Taxation Calculation
- ☑ Periodic LTV Checks

Collection Management

- ☑ Borrower Categorisation
- ☑ Borrower Communication
- ☑ Case Prioritisation
- ☑ Workflows for Collections
- ☑ Recovery Automation

Integrations

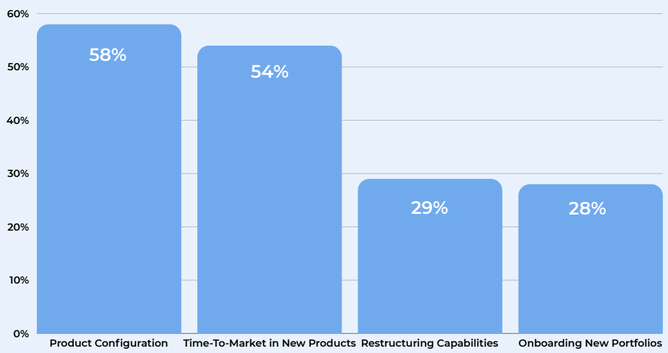
- ☑ Payment Gateways
- ☑ IVR Telephony
- ☑ Email Gateways
- ☑ Third-party Applications
- ☑ Internal Applications

Performance Management

- ☑ Default Customer Analysis
- ☑ Smart Views
- ☑ Performance Tracking
- ☑ Dynamic Micro/Macro reports

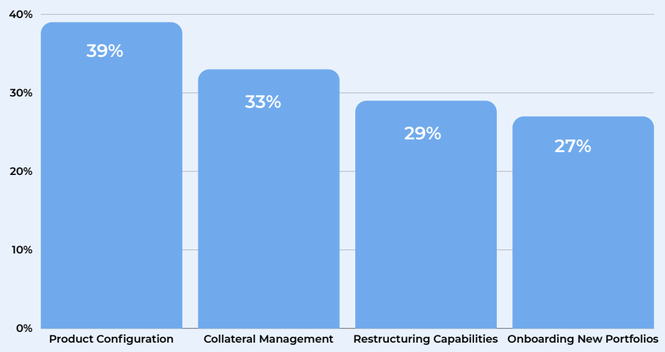
Key Checkboxes for LMS

Key Challenges of LMS



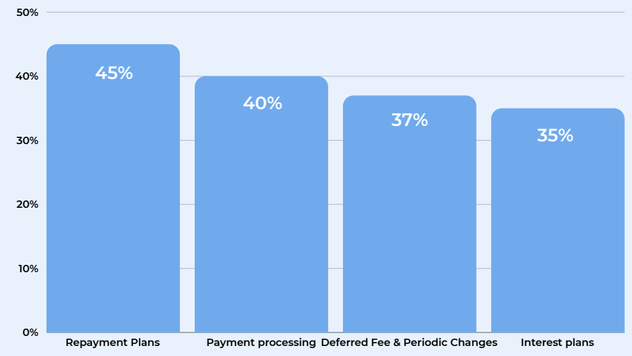
- The biggest problem statement for lenders in LMS is configuration as that hinders their ability to create personalized loan products.
- Time-to-market follows as a close second which indicates scope for greater automation in both product creation and market release.

Most Desired Features of LMS



- Lenders demand more flexible LMS platforms for personalized offerings due to democratized user data.
- Efficient workflows for secured lending, notably collateral management, are still sought after despite advancements in unsecured lending.

Areas Where Tech Flexibility is Needed



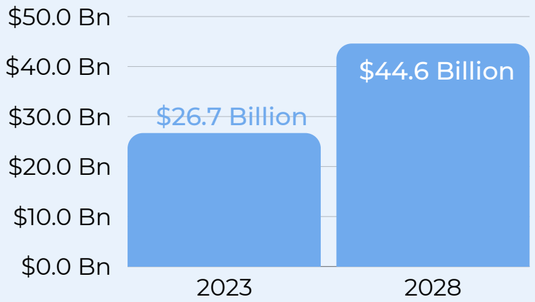
- With the onset of structured repayment plans and deferred repayment plans, lenders are looking to offer greater flexibility to borrowers.
- As digital transactions have increased significantly in volume, lenders want more comprehensive payment modules.

Source: Leadsquared, Qualco

2.4 TRENDS IN LOAN MANAGEMENT SYSTEMS

To account for a rapidly evolving landscape, LMS are evolving to accommodate cutting-edge technology to increase effectiveness across the board for lenders and offer better products to borrowers.

AI & ML-Based Credit Scoring



Global Credit Scoring Market Size

Benefits of using AI for checking creditworthiness

What Does It Mean?

Banks calculate portfolio at risk and the potential of default using a multitude of static variables. ML and AI allow banks not just real-time insight into the borrowers' actions, but also faster and more precise synthesis of these data points.

How Does It Benefit Lenders?

Using AI and ML can not only allow lenders to track their credit risk at a real-time basis but, this technology can also allow banks to factor in more dynamic variables in their calculation which can aid them in portfolio management and credit risk mitigation.

What Is The Growth Opportunity?

Growing at a CAGR of 67.2%, the credit-scoring market is expected to reach $44.6 billion by 2028. As one-fourth of borrowers in India prefer online lending channels, and the tally of NTC customers reaches 400 million, AI and ML will find increased use for unlocking these markets and tracking their behavior for more accurate forecasts.

Self-Service Portals

Self-service Adoption Growth in Financial Services Users

Citibank's Case Study After Using Self-Service Portals

What Does It Mean?

Self-service portals provide borrowers with a centralized location from where they can manage their borrowings. Lenders are now working to build such portals to allow borrowers additional flexibility digitally. They also serve as another use case for AI-powered chatbots.

How Does It Benefit Lenders?

Self-service portals not only allow lenders to reduce their manpower needs but also enables greater satisfaction amongst customers. Since modern LMS solutions can enable such portals, they greatly boost customer engagement.

What Is The Growth Opportunity?

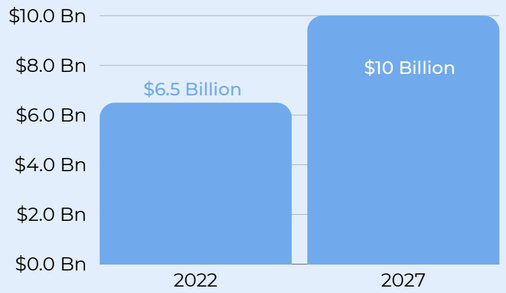
As per Zendesk, financial services users' adoption of self-service portals has increased by 5.4x in 2023. As lending becomes increasingly digital, this trend is expected to grow.

Source: Juniper Research, Zendesk, Matellio

2.5 WHITESPACES IN LOAN MANAGEMENT SYSTEMS

While there has been considerable evolution for LMS platforms over the past few years, there are areas that need to be addressed to offer a more sophisticated suite of offerings.

AI-Powered Fraud Detection



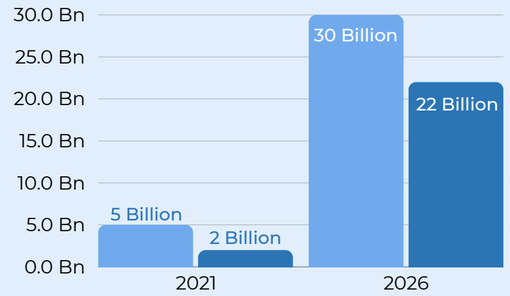
Business Spend on AI-enabled Financial Fraud Detection

PayPal Case Study After Using AI for Fraud Detection

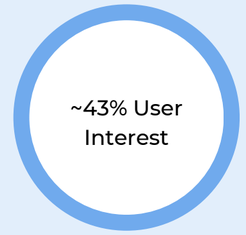
Growth Opportunity

Along with prospecting, lenders are using AI to screen out fraudulent applications and transactions. AI can not only detect irregularities more accurately, but can also do so at a much greater while decreasing with underlying cost. Therefore, lenders are looking to incorporate such modules in their LMS platforms.

Flexible Repayment Architecture



Retail BNPL Users in India

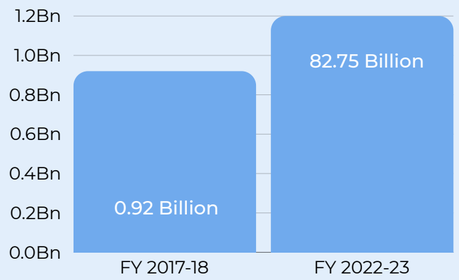


Market Demand for Banks' BNPL Products

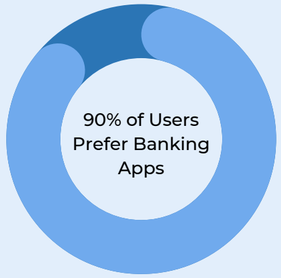
Growth Opportunity

As lenders are looking to attract digitally native borrowers and the new-to-credit market, they are looking to offer more flexible repayment plans to them. Since such users are typically of younger generations, they are naturally attracted to them. Lenders are looking to create customized stacks that can accommodate such products.

Mobile Optimisation



UPI Transaction Processed across India

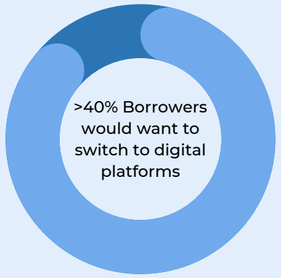


Market Demand

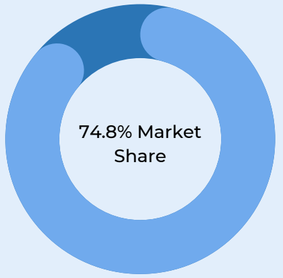
Growth Opportunity

Married with the rise of digital lending products, there has been a suite of offerings targeted specifically for mobile users. With India having over 659 million smartphone users, lenders are looking to create customized experiences to target mobile customers and offer them greater flexibility in managing their borrowing via those devices.

Secured Loan Servicing Stacks for Different Asset Classes



Changing User Preferences Amongst Borrowers



Secured Loans Market Share in Retail Lending

Growth Opportunity

As the borrower preferences have shifted, there is a growing demand for completely digital borrowing experiences. To accommodate this market, LMS platforms would need to incorporate modules that can facilitate secured lending at a greater scale through the valuation of different assets, default treatment, repossession, liquidation, etc. digitally.

Source: Juniper Research, Nvidia, Statista, PYMENTS, PIB, Business of Apps

3.1 DEBT COLLECTION SOLUTIONS

A debt collection software is a tool for streamlining and automating the collection process to increase collections and mitigate credit risk through a panoramic view of the collections process.

Processes Debt Collection Solutions Serve

Account / Data Management	Debt collection software act as a central hub for collections by storing and organizing debtor data (names, balances, history, etc.) and automatically updating accounts with new information for efficient tracking and management by lenders.
Collection Management	These systems organize the collection process by creating automated workflows, monitoring accounts to track repayment possibilities and evaluate credit risk, and automatically assigning cases to debt collection agents for expediting the process.
Borrower Communication	Debt collection software offers multi-channel communication tools with pre-built templates and automated scheduling. This allows personalized outreach at scale.
Payment Processing	Such systems integrate with secure payment gateways, enabling debtors to make online payments directly through the platform. This streamlines transactions, reduces manual processing, and provides real-time payment confirmation.
Reporting	Debt collection software analyzes vast data on debtor behavior and collection efforts, generating insights through advanced analytics that identify trends and measure collection effectiveness. It also tracks communication and actions to ensure adherence to compliance regulations.

Key Debt Collection Solutions

Credgenics	DPDzero	leadsquared	datacultr	Prodigal	CREDITAS
A SaaS-based platform that provides multi-channel digital communications, AI powered predictor models, comprehensive dashboards and deep analytical models amongst other features.	A debt collection platform, managing from data automation to recovery, by prioritising borrower relationships and compliance through their own engine.	Leadsquared helps lenders manage the end-to-end field collections lifecycle with advanced automation, guided actions and direct connect to fraud control teams.	A risk management and digital debt collection platform, enabling lenders to reduce risk on 'new to credit' customers by binding the loan to their smartphones.	Optimises payments with targeted digital engagement. Prioritize accounts based on fresh information. Transform agent performance across the board.	Provides lending institutions around the world with tech-based debt collections solutions to help them unlock efficiencies, enhance the brand experience, improve recovery success and reduce cost.

Processes Fraud and Risk Management Tools Serve

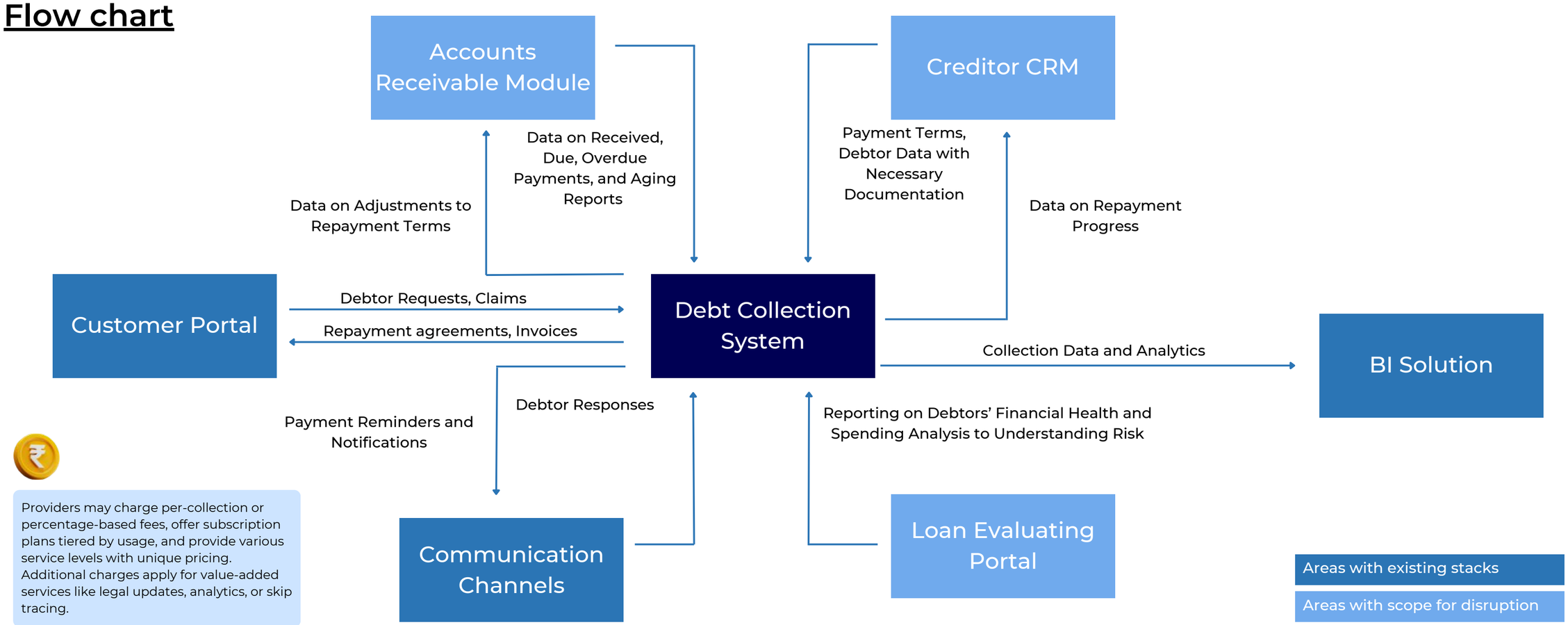
Risk Governance	FRM tools allow lenders to finetune the risk parameters and overall risk approach they would be looking to adopt in their portfolio. This can not only automate parts of the lending and risk management processes, but also allow the lender to alter their risk approach from one centralised console.
Application Verification	FRM tools integrate with several data repositories to vet borrowers' applications. This not only helps evaluate the creditworthiness of applications, but also verify their authenticity through document verification.
Portfolio Tracking	Working with alternate data providers, these tools can track borrowers' risk profile and their behavior on a real-time basis. They can also recognise behavioral patterns in the borrowers to detect any anomalies and flag them to the borrower. This has a greater use case in credit cards.
Case Management and Resolution	In addition to identifying risks, FRM tools also work with fraud analysts to manage their workloads and assign them cases suited to them. This optimised their efficiency. They also offer direct ways of communicating with borrowers-at-risk and resolving situations.
Reporting	As a result of monitoring both the portfolio and the inflow of applications, FRM tools are able to provide precise insights into both the nature of applications received by the lender and also the core characteristics of their portfolio. This helps lenders manage their operations better.

Source: Expert Interviews

3.2 MODULAR DEBT COLLECTION SOLUTIONS

As the scope of processes undertaken by debt collection solutions has increased, lenders are looking to create more personalized workflows through specific integrations. As the penetration of generative AI across these workflows increases, their intuitiveness and precision are bound to increase.

Flow chart



Key Integrations for Debt Collections

tcn	TCN offers a robust cloud call center technology in the industry to boost revenue, recovery rates and compliance for lenders.
LIVEVOX	Livevox offers a cloud-powered omnichannel collections platform that is easy to use and optimise.
Five9	Five9 helps contact centers automate debt recovery and optimize agent effectiveness while lowering operational costs
GENESYS	Genesys helps manage manage account assignment, segmentation and exception handling for the entire lifecycle including collections, litigation or recovery.

Key Integrations for FRM

TransUnion	TransUnion has tools like TruValidate and TruVision which power identity verification and credit risk management respectively
Kount An Equifax Company	Kount offers a complete approach to trust and safety with tools for payments fraud, identity verification, and compliance.
squirro	Squirro helps companies to identify and evaluate risks while minimizing manual and time-consuming research.
actico	Actico allows lenders to analyze and monitor credit risks, automate loan and decision-making processes

Source: Expert Interviews

3.3 DEBT COLLECTION SOLUTIONS LANDSCAPE

Since the services covered by debt management solutions has increased over the past few years, the checklist for ideal solutions has gotten more complex. As AI percolates to these solutions, its use-cases are starting to emerge.

Key Checkboxes for Debt Collection Solutions

Borrower Management

- Panoramic Borrower Profile
- Borrower Categorisation
- Borrower Activity Tracking
- Communication Log

User Management

- Contact Centres
- Field Agents
- Support Team
- Legal Team
- Fraud Control Team

Automation

- Workflow Automation
- Recovery Automation
- Case Prioritisation
- Agent Day Planning
- Communication Automation

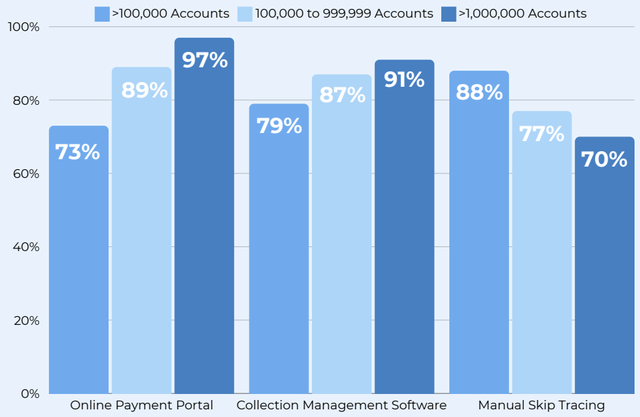
Integrations

- Payment Gateways
- IVR Telephony
- Email Gateways
- Internal Applications
- Third-party Applications

Analytics & Reporting

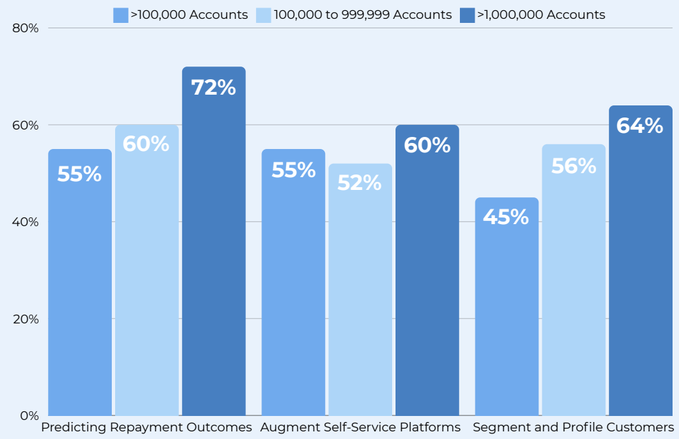
- Smart Views Dashboard
- Shareable Reports
- Default Customer Analysis
- Collections Funnel
- Performance Tracking
- Progressive Collection Efficiency

What Tools Are Companies Using?



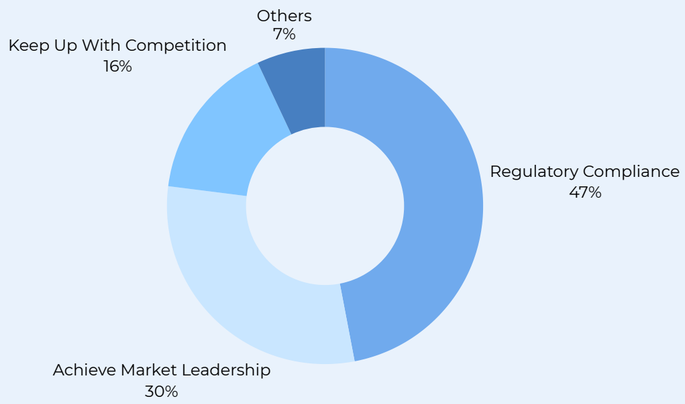
As online transactions become more popular, companies, especially those with fewer accounts, are relying on online platforms for collections. In contrast, larger companies prefer specialized collection management software for its added functionality and customization options.

How are Companies Using AI?



Collection companies leverage AI to analyze big data rapidly and predict repayment outcomes in their portfolios efficiently. Lenders are also adopting self-service platforms to enhance automation and operational efficiency.

What is Driving Tech Investment?



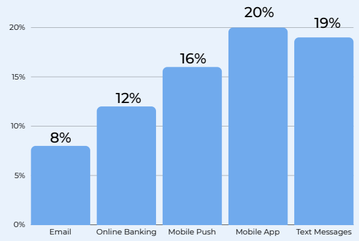
New technology serves as a watchtower, ensuring oversight and auditability of operations, particularly in compliance. Optimizing collection rates and net interest margins drives lenders to adopt market-leading tech.

Source: Leadsquared, TransUnion

3.4 TRENDS IN DEBT COLLECTION SOLUTIONS

As customer behavior and the enabling technology continue to evolve at break-neck pace, these systems are also undergoing rapid evolutions to provide more flexibility to lenders and more ease to borrowers.

Omnichannel Debt Collections



Efficacy of Different Communication Channels in Receiving Full Payment

Only 4% Debtors Are Reached in The First Attempt

Benefits of using AI for checking creditworthiness

What Does It Mean?

Omnichannel debt collection utilizes various communication channels (email, text, online portals) to reach debtors, leveraging data to personalize outreach and automate interactions for efficient recovery.

How Does It Benefit Lenders?

By using debtor data to predicting the most effective communications channel, lenders are looking to increase successful contacts which is the biggest problem statement in collections (only 4% debtors are reached in the first attempt).

What Is The Growth Opportunity?

Lenders are shifting towards digital-centric approaches, recognizing the higher success rates of digital channels compared to traditional ones, which typically achieve only a 12% successful contact rate.

Dynamic Risk Monitoring

20% Increase in Fraud Detection in 2023

BNY Mellon Case Study

$108 Billion in Credit Loss in 2023

Credit Loss Globally (2023)

What Does It Mean?

As access to real-time customer data is democratized, lenders use it to observe their borrowers on a real-time basis to generate precise repayment probabilities. This greatly boosts the risk management process.

How Does It Benefit Lenders?

Lenders are able to use this added access to analyze borrower behavior with greater precision which makes the entire process more dynamic and transparent. They are also able to mitigate emerging risks and proactively reach borrowers-at-risk.

What Is The Growth Opportunity?

As the global credit loss reached $108 billion in 2023, lenders are looking for ways that can add more clarity to the cycle for them and identify possible risks as soon as possible.

Auto Debit

1351 Banks Live on eNach

The Rising Popularity of eNach Amongst Banks

117.6 Billion UPI Transactions IN 2023

Total Transactions Processed by UPI in 2023

What Does It Mean?

Autodebit in collections allows pre-authorized, automatic deductions from a debtor's account on a scheduled basis. This streamlines payments, reduces delinquencies, and integrates with collection software for real-time updates on received funds.

How Does It Benefit Lenders?

Autodebit in collections minimizes manual payment processing, eliminates late fees due to missed payments, and ensures predictable cash flow for lenders through automated deductions directly from debtor accounts.

What Is The Growth Opportunity?

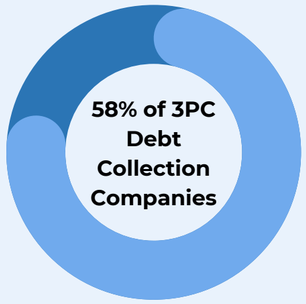
As the transactions processed on UPI exceeded 100 billion in 2023, users around the country have become comfortable with digital payments. Banks and other lenders are looking to make use of this familiarity to reduce their credit risk.

Source: Mckinsey, TransUnion, Nvidia, S&P Global, eNach, Economic Times

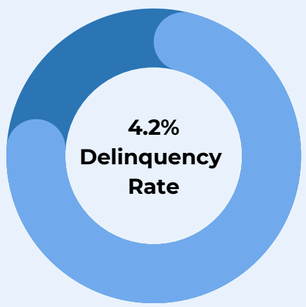
3.5 WHITESPACES IN DEBT COLLECTION SYSTEMS

To meet the problem statements associated with traditional debt collection systems and the emergence of new areas where technology can cover market gaps, these platforms need to increase in operational capabilities and features.

Predictive Delinquency Analysis



Debt Collection Companies Looking to Use AI for Predicting Payment Outcomes



Delinquency in the Digital Lending Sector of India

Growth Opportunity

The biggest use-case of AI in debt collections is in its ability to identify borrower patterns and predict delinquency ahead of time. As the delinquency rate in digital lending in India reaches 4.2% (primarily driven by micro-loans and the new-to-credit segment), lenders can integrated AI to foresee borrower behavior ahead of time.

Autonomous Collection Bots

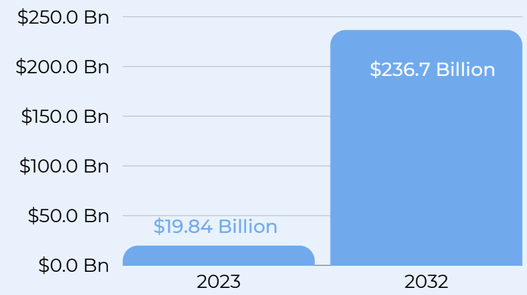
Cost Benefit of Using Chatbots in Banking

Effectiveness of Traditional Communication Methods in Debt Collection (Phone, Voicemail and Letters)

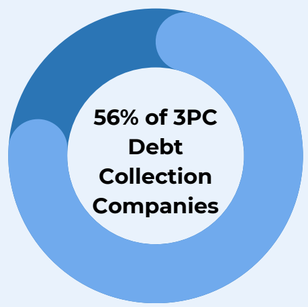
Growth Opportunity

Along with the increase in self-service portals, the BFSI sector is looking towards chatbots to provide 24/7 customer service to their users. This technology can be used in debt collections as well to personalize interactions to a greater degree. In addition operational efficiency, these bots can also have more empathetic discussions with borrowers which can enhance collection rates.

Borrower Cohortisation



Global Market for AI in Banking



Debt Collection Companies Looking to Use AI for Customer Segmentation

Growth Opportunity

Banks and lenders as a whole are looking to increase investments into AI for reducing their credit loss and making their operations more efficient. Better user segmentation can not only increase the lucrativeness of their products through higher personalization, but also boost the effectiveness of their risk management processes through more clarity on the borrower profile and the risk associated with their borrowings. They can also create personalized collection plans.

Source: TransUnion, SIDBI, Juniper Research, McKinsey, Equifax, Fintech Association For Consumer Empowerment

4.1 CREDIT CARD MANAGEMENT SYSTEM (CCMS)

CCMS empowers banks and financial institutions to provide credit card services, with modules facilitating customer approval, card issuance, personalized offers, purchase management, and payment handling.

Process of Creating a Credit Card

Application via LOS	The process begins when a customer applies for a credit card through the LOS. The LOS captures the application details and performs initial checks, like eligibility criteria and credit checks using Aadhaar and PAN.
Approval and Account Setup in LMS	Once the application passes the initial checks, the LMS takes over for credit risk assessment and approval. Upon approval, the LMS helps set up the credit account with e-KYC. For secured cards, digital lien marking needs to happen.
Card Details Generation in CCMS	The CCMS generates the credit card details, including the card number, expiry date, and CVV and is physically produced and personalised with the customer's name and card details. Online form factors exist today.
Fraud Checks with FRM	Before the card is issued, the Fraud Risk Management (FRM) system assesses the application and the customer for potential fraud risks to ensure the security of the card issuance process.
Card Issuance and Dispatch	The CCMS approves and coordinates card issuance, including printing and dispatching the physical card to customers. Cards are typically sent inactive for security and need activation. User-friendly experience layers, like mobile apps or customer portals, aid in activation, PIN setup, and card management, often integrated with back-office reporting in modern systems.

Process of Making a Transaction via Credit Card

Transaction Initiation	When a customer uses the card for a transaction, the merchant's mPOS system or online payment gateway captures the card details and initiates the transaction. The transaction gets routed to ACS through network routes, the ACS validates the OTP and network sends a signal to card processor.
Authorisation by CCMs	The CCMS receives the transaction request, verifies the card details (switch integration configures the switch to route transactions based on BINs (Bank Identification Number) using protocols like ISO 8583 for messaging), checks for sufficient credit limit, and then either authorises or declines the transaction.
Fraud Monitoring by FRM	Concurrently, the FRM system evaluates the transaction for potential fraud based on various parameters like transaction amount, location, and customer's spending patterns. New age systems can have different merchant-level controls.
Transaction Posting & Account Update in LMS	Upon successful authorisation, the transaction is posted to the customer's account in the LMS, updating the account balance and available credit.

Process of Collecting Payement via Credit Card

Statement Generation by CCMS	The CCMS issues monthly statements for cardholders, detailing transactions, dues, and minimum payments, which can be divided into multiple installments. It informs the bank of collection amounts, managed through a pool account across networks and deducted upon settlement.
Payment Processing & Account Update in LMS	The customer makes a payment, which can be processed through various channels like net banking, UPI, or direct bank transfers and further the payment is updated in the customer's account in the LMS, reducing the outstanding balance and updating the available credit.
Collections	If payments are overdue, the Collections system gets involved, using data from the Customer Management System (CMS) to manage communication and recovery processes effectively.
Reporting and Analytics	The data is collected and analysed for reporting, insights, and continuous improvement of the credit card program, enhancing customer experience and operational efficiency. It also gives information to CIBIL for the customer’s credit score.

Source: PISMO Blog

4.2 EVOLUTION OF CREDIT CARD MANAGEMENT SYSTEM (CCMS)

The transition from traditional to next-gen platforms, today's CCMS solutions seamlessly integrate with external data ecosystems in real-time, enhancing precision and adaptability across the lending landscape.

Evolution of CCMS

Pre 2010

- Magnetic stripe technology standard for data storage.
- Basic fraud detection algorithms with limited predictive capabilities.
- Traditional banking infrastructure with proprietary systems for credit card management.
- Initial introduction of EMV (Europay, Mastercard, and Visa) chip technology for enhanced security.
- Use of batch processing for transaction settlements.

2010-2015

- Widespread adoption of EMV chip technology, reducing counterfeit card fraud.
- Introduction of PCI DSS (Payment Card Industry Data Security Standard) compliance for enhanced security measures.
- Development of proprietary APIs by banks for integration with payment gateways and merchant systems.
- Initial rollouts of contactless payment technologies, such as NFC (Near Field Communication).
- Growth of online fraud detection services like Falcon and integration with CCMS for real-time fraud monitoring.

Post 2015

- Rapid API adoption for seamless integration between CCMS, payment gateways, and fintech.
- Introduction of tokenization and encryption for secure data transmission.
- Emergence of open banking standards for secure data sharing.
- Widespread use of AI in fraud detection for predictive analytics.
- Integration of biometric authentication for secure verification.
- Expansion of mobile wallet and digital payment services like Apple Pay, Google Pay, BNPL, and UPI for contactless payments.

Key Credit Card Management Systems

FIS	Fiserv	TSYS	PISMO	M2P	Hyperface	Vegapay
Provides comprehensive card management solutions encompassing debit, credit, and ATM services, integrating card processing, risk management, digital enablement, and loyalty programs to enhance financial institutions' card offerings.	Provides integrated payment processing and card management solutions across global financial ecosystems.	Delivers end-to-end payment solutions including card processing, authorisation, settlement, and fraud management, with a focus on enhancing customer experience and operational efficiency for financial institutions globally.	Offers a cloud-native platform with 100% API-based architecture for issuing credit, debit, and prepaid cards, featuring flexible innovation, quick scaling, live stream data analytics, and a SaaS model ensuring continuous technology updates.	Offers a platform enabling rapid deployment of diverse card programs with integrated modules for KYC, onboarding, transaction processing, and customer engagement, tailored for agility and scalability in the credit card domain.	Provides a pre-integrated Credit Cards-as-a-Service platform with a focus on co-branded credit card stacks, enabling rapid program launches with features like intuitive onboarding journeys, high power customer engagement, and comprehensive card lifecycle management.	Plug and play solution for FIs and Fintechs to start off their lending business by integrating with existing APIs which cover end-to-end lending lifecycle, co-branded cards and multi currency cards.

Legacy players like FIS, Fiserv and TSYS lack the flexibility and innovation that new-age players offer. They also have longer timelines to go live and typically provide just a core CCMS without an added experience layer. New age platforms are differentiated on the basis of depth of product offering, time to integrate and stability of product.

Source: Razorpay, M2P Blog

4.3 CCMS PERFORMANCE METRICS

Comprehensive CCMS must assimilate a myriad of factors and data inputs for proficient card management, with nuances in workflows between different card services.

Key Parameters to Consider for BSFIs

Compliances and Security Standards

Rigorous examination of adherence to comply to regulatory frameworks (PCI DSS, GDPR, local banking regulations) and implementation of cryptographic protocols for data integrity and confidentiality; assessment of compliance certifications and meet reporting requirments.

Integration Capabilities with Banking Ecosystem

Detailed analysis of API/SDK documentation, compatibility with existing banking policies, payment gateways, and third-party services; pilot integration projects to evaluate interoperability, data exchange efficiency, and middleware requirements.

Scalability and Performance

Evaluation of architectural design for dynamic resource allocation, stress testing under peak loads, analysis of cloud-based solutions and microservice architecture, and integration capabilities with banking systems to ensure scalability and future-proofing for business growth.

Fraud Detection and Risk Management

Assessment of fraud detection algorithms' sophistication, including ML and AI capabilities for real-time pattern recognition; evaluation of integration with external fraud databases and adaptability of fraud models to emerging threats.

Customer Experience and Personalisation

Examination of user interface customisation options, real-time notification systems, and rewards management features; user journey simulations and analysis of customer feedback on usability and engagement metrics.

Stability and No Downtime

>99.9% uptime guarantee, ensuring continuous service availability. Additionally, the system must exhibit minimal latency in transaction processing, supporting real-time authorisation and settlement to enhance user experience and operational efficiency.

How do CCMS platforms earn money?

Software Licensing: Providers may charge a one-time license fee for the use of their software, followed by regular updates and maintenance fees.
SaaS: A recurring subscription fee is charged to access the software based on the volume of accounts, users or transactions.
Transaction-based Fee: Some CCMS might charge a fee for every transaction processed through the system.
Additional Services: Fees for additional services apart from their core functions, like analytics, FRM or report generations etc.

Key Metrics Analysed

Customer Activation

Measures the percentage of credit card activated, which means issued and have had a first transaction authorised indicating converting users.

Fraud Detection Accuracy

Quantifies the system's fraud detection precision, balancing false positives and true fraud identification to optimize security and user experience.

Average Transaction Processing Time

Measures transaction completion time, indicating CCMS payment processing efficiency.

Retention Rate

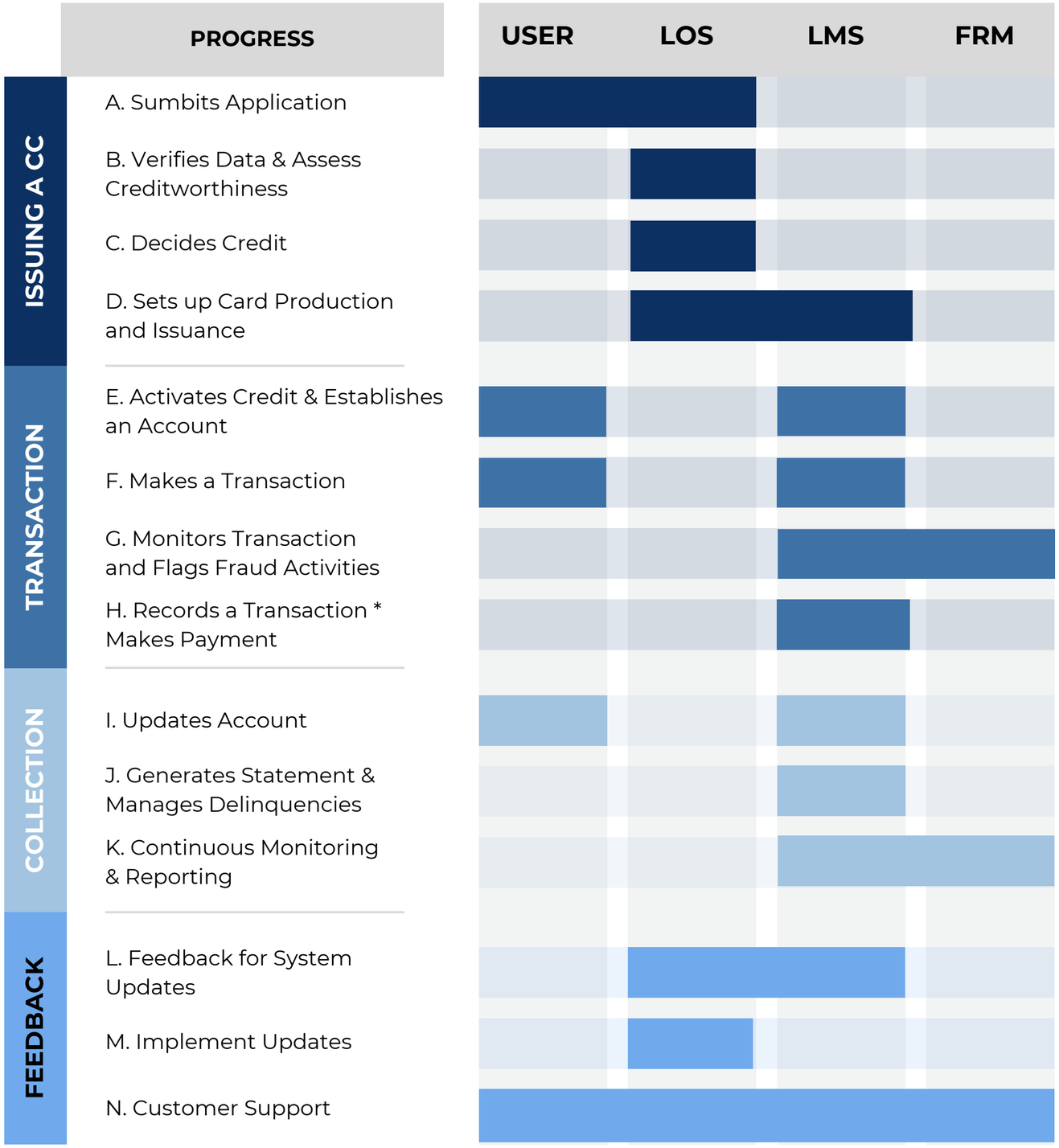
Measures the percentage of credit card holders who continue to use the card over a specific period, reflecting customer loyalty and satisfaction with the card services

Source: Electronic Pay, Cloudbankin, Stripe, Plaid, FinModelLabs

4.4 MODULAR CCMS SOLUTIONS

With rapid evolution, CCMS solutions are now far more adaptive. They cannot only service a large part of the lending workflow through in-built systems, but can interact with external data providers real-time to add more precision to the process.

CCMS Flow



B. Account Aggregator integration will improve data verifiability.

C. Gen AI will aid real-time creditworthiness evaluation using alternative data. Further, NTC customers could also get secured cards.

F. The different form factors of cards have emerged; new age switches have adapted to it. For eg. the UPI Switch.

H. The LMS records it in the central banking system, and integrated with front office and back office modules.

K. Continuous reporting is required for Technological performance (Downtime, Fraud Detection Capability, Dispute Analysis) and Business metrics (Chargebacks, Transaction Reconciliation, Loyalty Programme, Resolution Monitoring).

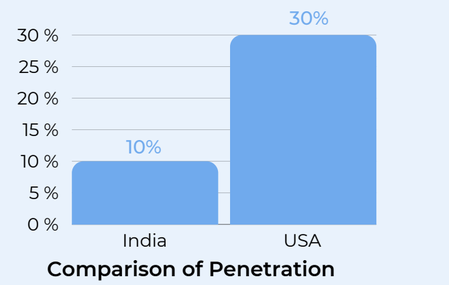
N. Gen AI-driven chatbot integration for 24/7 customer query resolution and support within CCMS platforms.

Source: Expert Interviews

4.5 TRENDS IN CCMS

Amidst expanding data ecosystems, deeper partnerships, and advanced tech, CCMS is evolving, leveraging co-branded cards, UPI linkage, and analytics-driven personalization to reach broader audiences with enhanced precision.

Co-branded Cards



Comparison of Penetration

Co-branded Cards help in activating Dormant/Inactive Customers

What Does It Mean?

Credit cards issued jointly by a bank and a retail or service partner, featuring combined branding and benefits tied to the partner's offerings.

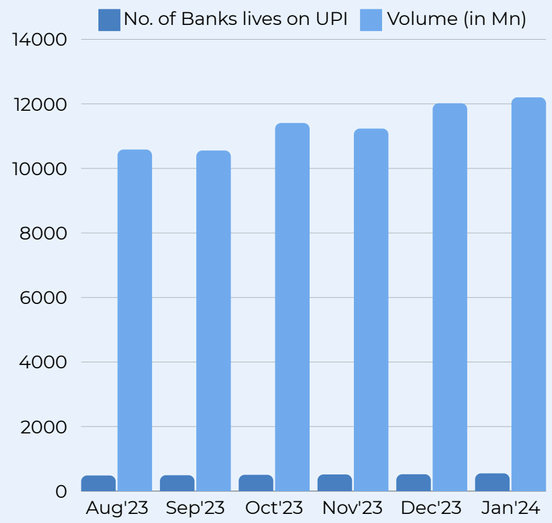
How Does It Benefit Lenders?

Enhances customer acquisition and retention by leveraging partner brand loyalty; diversifies revenue streams through shared marketing costs and increased card usage in partner ecosystems.

What Is The Growth Opportunity?

Expanding market penetration in niche segments; potential for increased transaction volumes and cross-selling opportunities.

Credit Cards linked to UPI



UPI 6-month Growth in India

What Does It Mean?

Linking credit card functionalities with UPI, enabling credit card transactions to be processed via UPI's real-time payment platform.

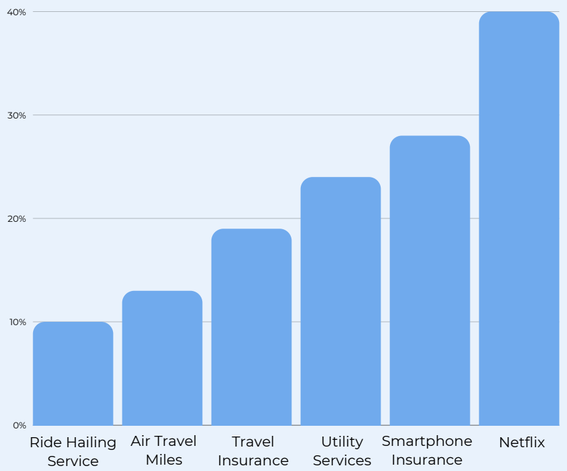
How Does It Benefit Lenders?

Opens new transaction channels for credit card users, potentially increasing transaction frequency and volume; enhances user convenience and transaction speed.

What Is The Growth Opportunity?

Access to India's rapidly growing UPI transaction market, which recorded 1 billion (NPCI) in early 2024, expanding credit card use cases and user base. Merchant acceptance will be higher.

Hyper-Personalisation



Banking Switch Incentives

What Does It Mean?

Employs data analytics to craft tailored offers based on individual consumer spending behaviours and objectives, enhancing issuer-consumer engagement and loyalty.

How Does It Benefit Lenders?

Enables issuers to refine consumer financial behavior understanding, facilitating targeted marketing, product relevance, and personalised financial guidance, which enhances customer value proposition and operational efficiency.

What Is The Growth Opportunity?

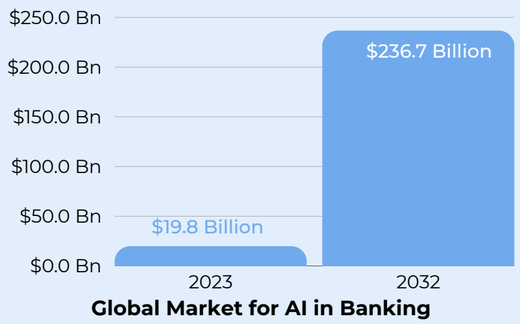
Utilizing analytics for enhanced cross-selling and upselling. Personalized offerings lead to greater market reach and stronger customer loyalty.

Source: The Advent of Co-branded Credit Cards in India (Potleee), NPCI, Your Story CapTable

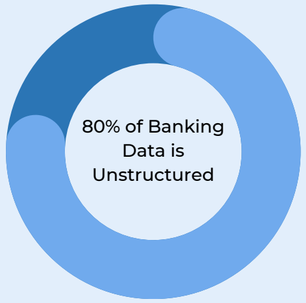
4.6 WHITESPACES IN CCMS

To unlock the potential of this market, lenders need to not only make use of new technologies and serve new audience bases better, but also look to develop new solutions that can make use of these tailwinds to become large outcomes.

AI-Powered Automated Underwriting, Financial Risk Management (FRM), and Loyalty Programs



Global Market for AI in Banking



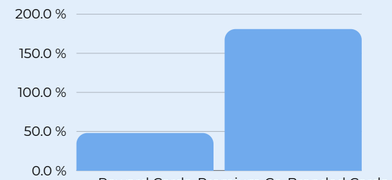
Growth Opportunity

Leveraging AI in CCMS for auto underwriting presents a transformative opportunity, enabling dynamic upselling and downselling while enhancing FRM. This technological integration facilitates real-time decision-making and risk assessment, optimizing the credit management ecosystem.

Multi-Party (>2) Co-Branded Collaboration

6 out of 10 millennials belong to customer loyalty programme

1 out of 3 credit card holders have a co-branded card

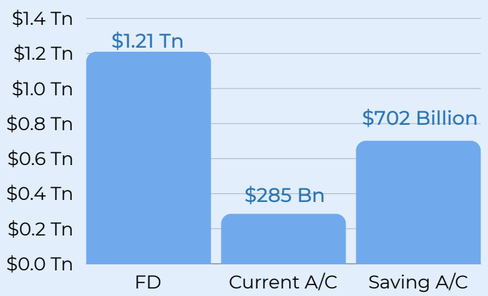


YoY Reward & Premium Co-Branded Card
(BankBazaar)

Growth Opportunity

Implementing a co-branded credit card within a CCMS allows for advanced risk and reward management through shared data analytics and algorithmic modeling, enhancing precision in credit risk evaluation and reward allocation by leveraging cross-brand insights for improved financial decision-making.

Hybrid Card Solutions

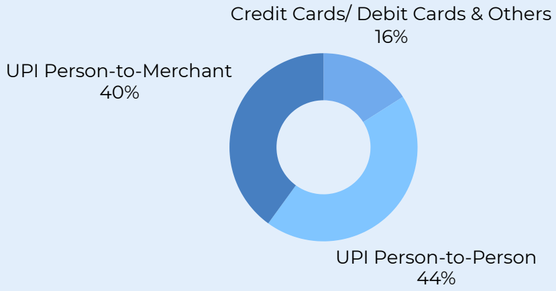


Financial Holdings Breakdown in India

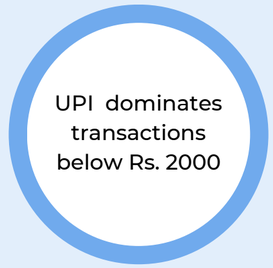
Growth Opportunity

Deploying hybrid cards (mixing debit and credit features) operating on Overdraft (OD) or Fixed Deposit (FD) mechanisms introduces variable credit options, allowing users access to revolving credit lines based on predefined financial assets. Credit card usage has increased by 20%, while debit card swipes declined by 31%, indicating a growth trend for secured cards.

Virtual Card and UPI Integration



Transaction Volume of Payment Methods



Growth Opportunity

The amalgamation of virtual cards with the UPI framework optimises transactional efficiency and security, facilitating seamless digital payments and enhancing user experience in a contactless payment ecosystem. CCMS will need to evolve to be flexible across card switches and UPI switches to be able to process such transactions.

Source: NPCI, Business Standard

5.1 CO-LENDING

Co-lending merges bank and non-bank resources to enhance loan accessibility and affordability, driven by market needs and guided by RBI's co-lending models (CLM) guidelines from November 2020.

What is Co-lending?

Co-lending is a collaboration where NBFCs team up with banks to offer loans, enabling NBFCs to grow rapidly using the bank's larger balance sheets, boosting their ROE. For banks, it expands their customer base into new segments through NBFCs' distribution channels. The substantial growth of many NBFCs has attracted Fintech companies' attention. In FY23, India's bank co-lending portfolio reached $3.04 billion.

Why Co-lending is needed?

Financial Inclusion
Targets underserved regions, enabling credit flow to EWS, LIG, and MIG through NBFCs' local reach and banks' capital.

Affordable Credit
Leverages bank-NBFC partnerships to offer lower interest rates, reducing financial barriers for borrowers.

Risk Distribution
Adopts an 80:20 funding model, balancing risk and incentivising quality loan origination.

Synergy
Combines banks resources with NBFCs' operational agility to increase market penetration/ portfolio diversification.

Efficiency
Streamlines loan processing via NBFCs' tech-driven platforms, ensuring rapid fund disbursal.

Evolution of Co-Lending

Pre 2010

- Initial partnerships formed, exploring synergy between banks' capital and NBFCs' local networks.
- Absence of formal guidelines led to ad-hoc and limited co-lending ventures.
- Limited digital infrastructure hindered efficient integration and scaling.

2010-2018

- RBI and regulators acknowledged and framed co-lending models.
- Technological advancements and fintech innovations facilitated collaborations.
- Increasing banks and NBFCs entered co-lending agreements driven by mutual benefits.

Post 2018

- Formalized co-lending models for banks and NBFCs, addressing operational and regulatory aspects.
- Advanced APIs and platforms for seamless co-lending ecosystems.
- Emphasis on financial inclusion, targeting diverse borrower segments.

Key Co-Lending Companies

Yubi	lentra	KNIGHT FINTECH
YubiCo. Lend is a digital platform for credit discovery, execution, and fulfilment. It enables lenders to seamlessly collaborate with multiple partners through a one-time API integration. With over INR 10k Cr. loans disbursed, it serves 10L+ retail clients and 500+ partners.	Lentra offers digital lending solutions, prioritizing automation for the entire loan lifecycle, from origination to repayment. This ensures smooth operations for banks and NBFCs. Recently, Lentra has expanded into co-lending modules as well.	Knight Utopia offers fintech solutions tailored for banks and financial institutions, focusing on treasury and credit. Their advanced middleware, Co-Lend, facilitates bank-NBFC collaboration for shared risks and enhanced returns. Serving over 70 clients with 120% YoY growth, it manages a $1 Bn AUM.

Knight Fintech's co-lending product offers seamless integration, comprehensive lending tools, and automatic reconciliation, optimizing processes for banks and NBFCs. It streamlines credit policies, enhances compliance checks, and fosters operational savings and flexibility for both parties.

Source: RBI, Yubi, Vinod Kothari Consultants

5.2 HOW IS A CO-LENDING MODEL OPERATED AND REGULATED?

The co-lending model operates under stringent regulatory frameworks to ensure seamless collaboration between entities and safeguard borrower interests.

Process of Co-Lending

LOS	• Front-end customer-facing portal managed by NBFC. • LOS systems of both banks and NBFCs must integrate seamlessly, allowing for the real-time exchange of applicant data, credit assessments, and loan eligibility criteria. • Implement dynamic, rule-based engines within LOS to accommodate varying credit policies of banks and NBFCs, ensuring compliance and adaptability to diverse borrower profiles. • Utilise advanced analytics and AI within LOS to automate loan decisioning processes, reducing turnaround times and enhancing the efficiency of credit underwriting. • Relationship depends upon master agreement arrangement, and can have a joint approval system.
LMS	• LMS should support joint portfolio management, enabling both parties to monitor and manage loans, track repayments, and assess loan performance collaboratively. • Implement risk management modules within LMS to dynamically adjust for shared risks, provisioning, and asset classification in line with regulatory requirements and agreed risk-sharing ratios. • Ensure LMS can accommodate various loan products and co-lending arrangements, supporting tailored loan terms, interest rates, and repayment schedules agreed upon by banks and NBFCs. • A joint asset charge creation for secured type loans between both the lenders.
Escrow	• Establish jointly managed escrow accounts, ensuring funds are disbursed and received transparently, with clear oversight from both lending parties. • Integrate automated triggers within escrow management systems for timely loan disbursements based on predefined criteria and loan agreement terms. • Structure escrow arrangements to comply with regulatory directives, safeguarding against fund commingling and ensuring fiduciary responsibilities are met.
Collections	• Develop a cohesive collection framework, after NBFC has initiated collection from the LMS, the loan is sent to the escrow amount where it is disbursed to the lenders in their profit sharing ratios. • Standardise borrower communication channels and messaging, ensuring clarity and consistency in collection efforts, while adhering to fair practices and regulatory guidelines. • Implement robust tracking and reporting tools within collection systems to monitor recovery rates, delinquency trends, and operational effectiveness, facilitating data-driven strategies.
Reporting	• Establish comprehensive reporting protocols that aggregate data across both entities, offering insights into portfolio health (NBFC to Banks), financial performance, and risk exposure. • Automate the generation of regulatory reports, ensuring timely and accurate compliance with central bank guidelines, including risk-sharing disclosures and financial statements. • Maintain detailed audit trails within reporting modules, capturing all co-lending activities, transactions, and decisions for transparency and accountability.

Note: Typically NBFCs take charge of engaging with customer.

Regulations for Co-Lending

Banks are mandated to ensure KYC adherence in line with RBI guidelines. While KYC due diligence can be executed via third parties, it's imperative that these entities are not domiciled in jurisdictions deemed high-risk by relevant assessments.

The NBFC and bank must establish a creditworthiness assessment framework in compliance with RBI directives that prohibit outsourcing of credit sanctioning. Both entities are required to conduct direct ex-ante due diligence.

Banks and NBFCs are required to independently manage accounts for each borrower's loan portion. All financial exchanges between these institutions must be conducted through an escrow account, ensuring no commingling of funds.

NBFC acts as the primary contact for customers, setting unified interest rates with banks and facilitating account statements through data-sharing agreements. A complaint resolution system is also mandated for NBFCs.

Source: RBI Co-Lending Guidelines, Expert Interview, Trustt, FinFlux

5.3 WHAT SHOULD A CO-LENDING MODEL LOOKLIKE?

Essential features for a co-lending platform include a robust technological infrastructure and transparent operations, guiding partners in selecting the most suitable platform for effective collaboration.

Must have Features

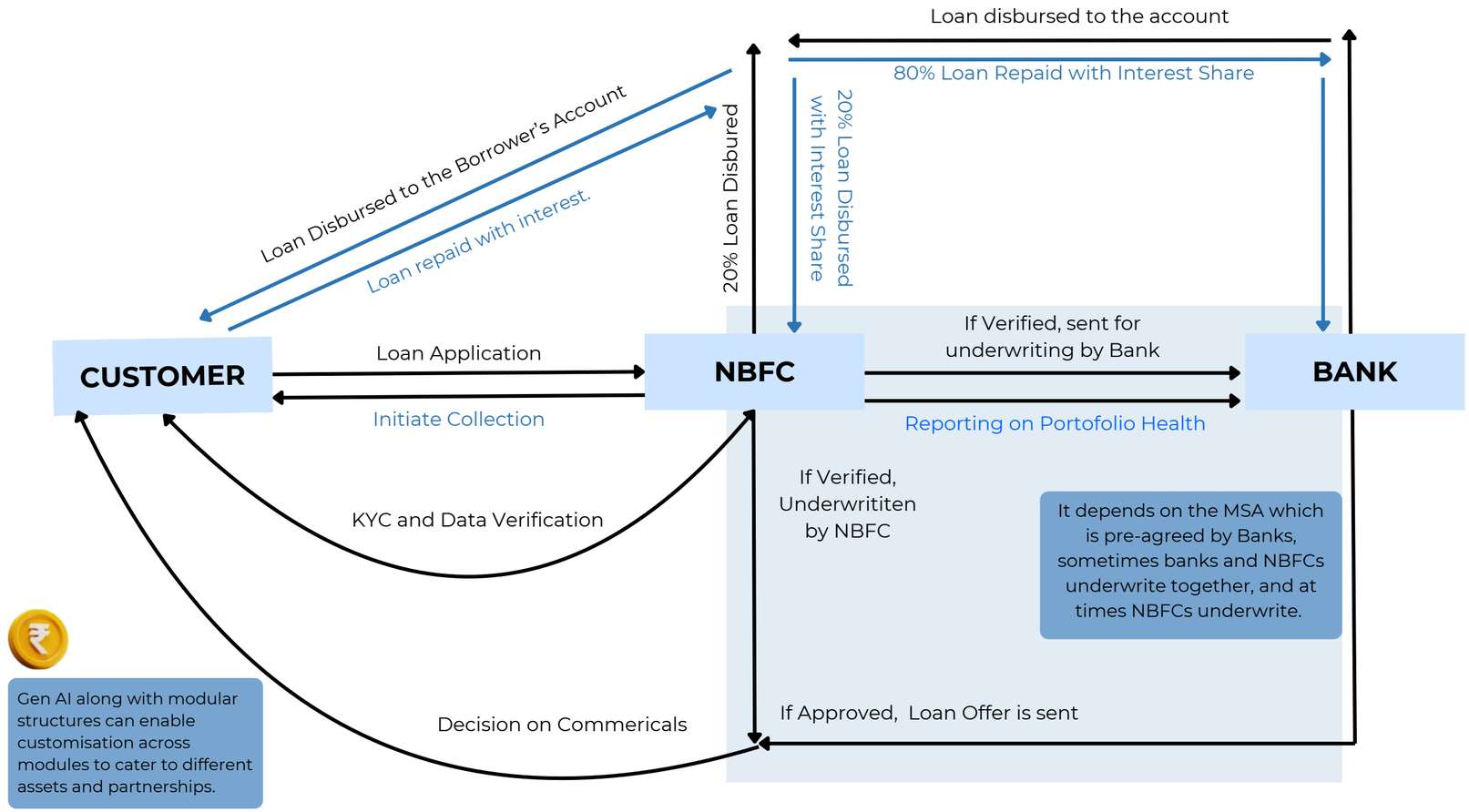
Reconciliation Middleware
A sophisticated middleware should be employed to facilitate accurate and transparent reconciliation among banks, non-banking financial companies (NBFCs), and borrowers.

Dynamic Business Rules Engine (BRE)
The platform should feature a dynamic BRE that allows for real-time decision-making and adaptation to changing lending conditions.

Automated Integration with CBS and CMS
Integration with Core Banking Systems (CBS) and Customer Management Systems (CMS) is crucial for streamlining operations and automating the lending process.

Low Rejection Rates
Advanced risk assessment capabilities and pre-agreed credit policies should be in place to reduce rejection rates and expand access to lending.

Inflow of Co-Lending/ Outflow of Co-Lending/ Reporting



How to choose the ideal Co-Lending Platform?

- **Risk Sharing Mechanism:** Partnerships for credit risk mitigation.
- **Regulatory Compliance:** Ensuring adherence to financial regulations.
- **Technology Infrastructure:** Robust operational backbone.
- **Data Management and Security:** Protection of sensitive financial data.
- **Customer and Data Ownership:** Clarification of customer information ownership.
- **Operational Efficiency:** Process efficiency through automation.
- **Reconciliation and Reporting:** Accurate financial reconciliation and reporting.
- **Flexibility and Scalability:** Adaptation to evolving markets and business growth.
- **Customer Experience:** Prioritizing smooth end-user interactions.
- **Integration with Credit Bureaus:** Supporting real-time credit assessments.

Source: RBI Co-Lending Guidelines, Expert Interview, Trustt, FinFlux

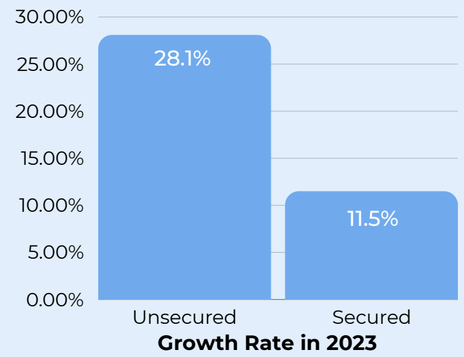
5.4 WHITESPACES AND TRENDS IN CO-LENDING

The co-lending space is ripe for innovation, with emerging trends and untapped opportunities set to redefine collaborative lending and expand financial inclusion. Regulation is only three years old and adoption across institutions is just picking up.

Whitespaces in Co-Lending

Secured Co-lending Platforms with Lien Marking

65% of the Gold Loan Market is unorganised, and 35% is organised which is worth $6 trillion, out of which there is an 80:20 ratio between Bank & NBFC



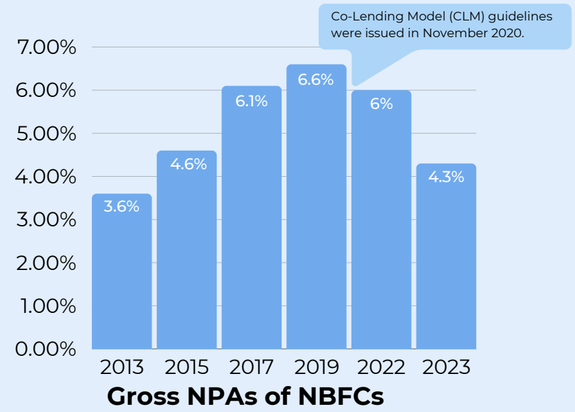
Growth Rate in 2023

Growth Opportunity

Developing platforms focused on secured co-lending, with capabilities for automated lien marking on various assets like gold, housing, vehicles, and mutual funds, represents a significant opportunity for expansion. Such technological advancements could enhance collateral management efficiency, bolster transaction security, and broaden the scope of asset-backed lending.

Advanced Joint Underwriting and Management System

Knight Fintech increased loan approval rates by 97% using advanced middleware capabilities in BRE, API, and risk framework.



Gross NPAs of NBFCs

Growth Opportunity

The advancement in co-lending technologies, with the integration of complex underwriting algorithms and unified management platforms, creates opportunities for expansion. The implementation of dynamic Business Rules Engines (BRE) and rigorous risk management systems enhances process efficiency, risk evaluation precision, and loan administration effectiveness, leading to improved co-lending partnership dynamics.

Customisable Modular Co-lending Solutions

There are a few co-lending platforms currently in the market but creating modular, plug-and-play co-lending technologies that can be tailored to different co-lending partnerships. Such solutions would simplify integration, improve scalability, and meet the diverse needs of co-lending entities, driving adoption and market expansion.

Views on Banks/NBFCs building their own Co-Lending platform

- Prevalent systems often act as gateways to LOS and LMS but lack crucial two-way integration for seamless co-lending.
- Platforms like Yubi are primarily focused on loan origination, potentially neglecting co-lending needs.
- Banks and NBFCs without their LOS/LMS may struggle to develop robust co-lending technology.
- Achieving a competitive edge requires successful integration between internal systems and external co-lending platforms, a challenge due to technical complexity and security standards.
- Institutions like UGro and Muthoot have internal systems not fully equipped for external co-lending collaboration.

Commercial Structures of a Co-Lending platform

- Subscription Fees: Recurring access fee, tiered by usage/features.
- Transaction-Based Fees: Per-loan fee aligning with lending volume.
- Revenue Sharing: Percentage of loan income shared with platform.
- Setup/Integration Fees: One-time charge for system setup.
- Tiered Access: Varied feature levels at different subscription tiers.
- Freemium Model: Basic free access, paid additional features.
- Enterprise Agreements: Customized contracts for large-scale needs.

In 1-to-1 NBFC-Bank setups, NBFCs access via bank's middleware/API. Larger NBFCs prefer paid models for efficiency.

Source: ET BSFI, Knight Fintech Blogs, Union Bank of India

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