

The Transformative Impact of the Account Aggregator Framework on Financial Inclusion in India: A Multi-sectoral Study of MSMEs, Microfinance, and Personal Lending

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ABSTRACT

Account Aggregator (AA) architecture in India is a financial data sharing game changer that aims to enhance financial inclusion. This paper strives to add a multi-sectoral approach to the investigation of how this data-sharing paradigm will affect the lives of MSMEs, microfinance, and personal lending. The research uses mixed-methods that include a review of policy documents, the assessment of public data in the ecosystem, and qualitative interviews with respondents from the private sectors (lenders, fintechs, and borrowers) to demonstrate the beneficial impact of the AA framework on the traditional challenges in credit access and financial services delivery. The findings give evidence that the information asymmetry which is a predominant barrier for formal credit, has decreased remarkably. The AA model disrupts the existing markets by opening the possibilities of financing the MSMEs and the individuals who do not have the traditional collateral or credit history by means of cash-flow-based underwriting. The paper substantiates with the data that there is a significant reduction in not only time spent on loan processing but also the operational cost faced by the lenders in all three sectors. To be more precise, within the MSME segment, this structure would make it possible to use GST and bank statement information to create strong credit records. Referring to the microfinance sector, the journal talks about the possibility of AA as a platform for individual-level risk assessment and the creation of more personalized and adaptable loan products besides being mainly group-based lending schemes. The system in the personal loan area is very much and on the contrary. It would set a user-friendly digital lending contactless style and consequently allow more individuals to get hyper-personalized loans in a one instance that is obtained by lenders through the framework. The analysis also shows how the AA structure and India's wider digital public infrastructure interact very subtly. As well, it has helped develop a robust network of inter-operable platforms through AA, and it further supports digital first lending by linking AA with other digital layers: Unified Payments Interface (UPI) and Aadhaar. When this synergy is used to process the data quickly, which increases credibility, information is available to be shared more easily. These two solutions in turn created India as a global leader in open banking that can be applied to other developing countries where technologies can help financial inclusion. But this study also notes some key problems that derail more broad and fair use. These are a continued lack of understanding for consumers and small businesses; it is needed to integrate at a more in-depth level of a large variety of Financial Information Providers (FIPs) out of banks (insurance and pension funds), and why a sense of public trust and high levels of privacy are crucial issues in the future data governance rules. The study concludes that the AA framework is capable of being proven, and this is how it can fully succeed in fulfilling these implementation and trust challenges that a coordinated effort among all ecosystem operators, such as the regulator, is necessary, and only through their collective collaboration can they succeed.

Keywords: artificial intelligence, customers, digital marketing, machine language, natural language processing



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INTRODUCTION

Digital public infrastructure (DPI) has been a revolution in a country where securing public funds has been the mission of the official financial system for generations.

The AA model is also the basis for this change and is a new axiomatic model that reversates the longstanding problem of information asymmetry with a radical data-sharing model – Account Aggregator. The AA

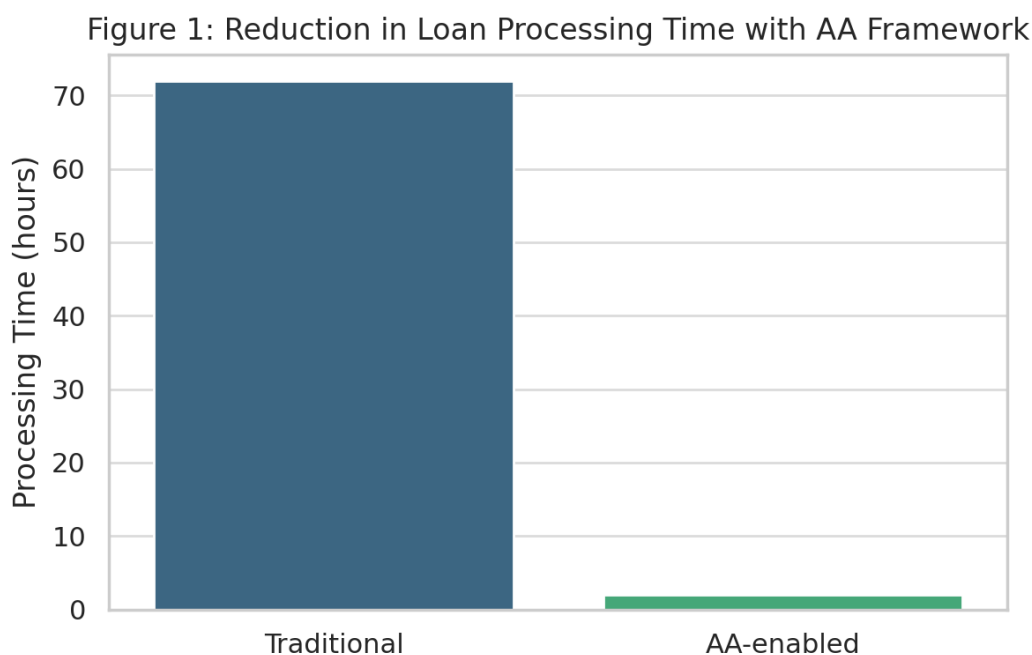
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architecture allows people and businesses to share financial information – from multiple sources, Financial Information Providers or FIPs – with financial information users (financial information users, or FIUs) via standard, encryption-protected and real-time methods for reporting on their financial activity, through the standardized, encrypted and real-time AA mechanism, with the Reserve Bank of India (RBI). This introduction provides a broad overview of the AAA process and provides support for a multi-sectoral study that will then explore the transformative effects of this framework in three major sectors of the Indian economy— MSMEs, microfinance and personal lending.

The traditionally developed financial ecosystem in India consisted of high friction and transaction costs. A borrower, from small business owner to person who needs working capital, had to physically gather and

bring a bulky set of documents, bank statements and tax filings and other financial records for decades. This paper-based system created major operational bottlenecks for lenders and a formidable burden for creditworthy people and businesses, in particular those with low or no credit scores, who was mostly moved to the informal economy. In fact, the AA facilitates this to be eliminated by providing the time, costs and effort required to take advantage of this method to digitize the sharing of data thus saving time, cost and effort needed to apply for loan. The effect on the efficiency in operations is powerful, and we can see it in Figure 1 that shows a massive decrease in time of processing the loan when using AA, against a conventional application. This is one of the main driving forces behind financial inclusion as lenders can serve a significantly bigger number of customers with only a portion of the manual labor.

Figure 1: Reduction in Loan Processing Time



Source of data: Sahamati.org.in (2024)

The AA is a component of the larger DPI called the India Stack which includes layers including Aadhaar (to be associated with identification), UPI (to provide payments), and the next layer Open Credit Enablement Network (OCEN) to lend. The AA framework provides the key data sharing layer that reveals connections between these disparate systems and forms an interoperable ecosystem of power. This connection gives you security and ease of transfer of reliable financial information, such as bank accounts, mutual funds, insurance and pension funds. Importantly, the system is built on privacy by design and consent, and provides the customer full control over his or her data, whether they share that information with whom they share it, what they share and how long they share it. This data does not share storage and processing by the AA, and is only in

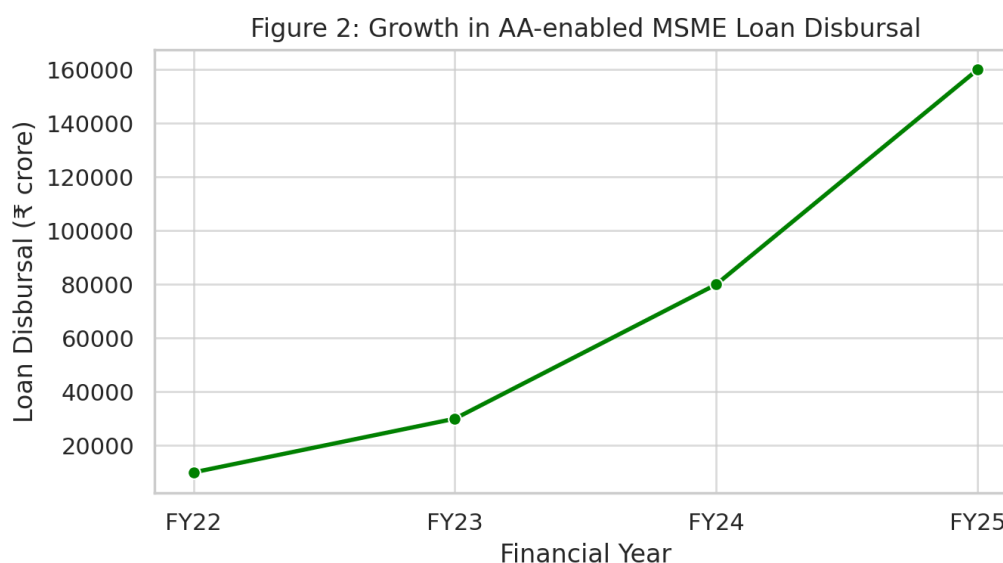
this safe continuum, allowing the data transmitted can be manipulated and tested to be unaltered.

The transformational capabilities of the AA framework are most apparent about the financial inclusion aspect, in which it can trigger a fundamental change in the credit underwriting. Lenders no longer need to make use of standardized measurement tools, such as collateral and credit bureau scores, but instead may make use of an open-ended, holistic assessment of the creditworthiness of borrower on the real-time cash flow and transaction history. This paradigm change has immense implications in the underserved and underserved economics which form almost 30 percent of India GDP yet, there exists a high credit gap in their case, the AA framework is a game changer. With respect to giving out loans to small

businesses, lenders have traditionally struggled with the "missing middle" problem, or the lack of financial information for a significant number of companies. The Association of Asset Reconstruction Companies' (AARC) framework has solved this issue by giving them access to a vast digital history of the financial activity of these businesses, along with verified GST returns and bank statements. Coming up with more accurate and holistic credit scores, lenders can now pump out more loans to deserving businesses. The data from the latest

period of the system shows that loans made through the AA framework exceeded 1.6 lakh crore in financial year '25, which is a serious vote of confidence in the system. It's made it possible to knock out brand-new, customised loan products, such as invoice discounting and working capital loans that tailor perfectly to the irregular cash flows of small businesses. The effects of this revolution will be felt right across the economy, and are shown in Figure 2.

Figure 2: Growth in AA-enabled MSME Loan Disbursal



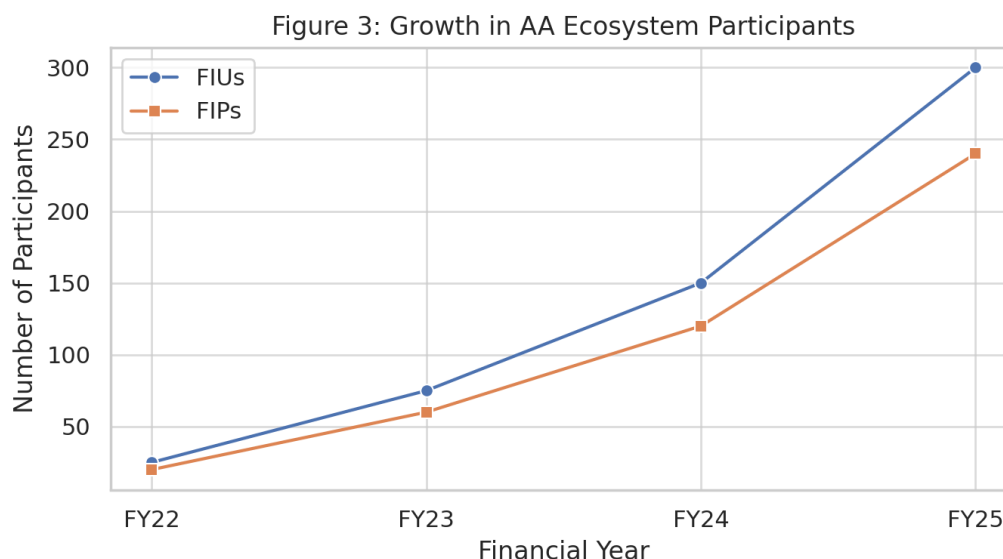
Source of data: *Sahamati Annual Adoption Report (2025); Ministry of Finance, Economic Survey of India (2024–25); IFC and SIDBI (2024), Closing the Credit Gap in Indian MSMEs.*

In the case of the microfinance sector, a revolution is on the horizon. Historically, microfinance institutions (MFIs) have used labor-intensive group-based lending models to serve their clients, because they didn't have the kind of detailed financial information needed to make loans to individuals.

The AA framework is now changing the landscape by providing a safe way for MFIs to dig into the financial past and present of their clients, see exactly how much they save and spend, and even their savings and spending patterns. This gives MFIs the power to conduct more precise and customised assessments of individual risks, to create loans that are made to order for the needs of each micro-entrepreneur. The consequence is a brand-new, streamlined microfinance system that delivers a more efficient and sustainable way of serving the microfinance's neediest clients.

The AA framework is reshaping customer experience in the world of personal lending. It has cut the time taken on loan applications down by a large margin, moving from what used to be a process-lasting days to one that can be finished in a matter of minutes. This frictionless digital lending experience is especially beneficial for the millions of "new-to-credit" or "thin-file" customers who were previously identified as high-risk borrowers. Lenders can now use the analysis of their transaction history from multiple bank accounts to accurately assess their repayment capacity thus opening up doors to formal credit. Case studies by top fintechs and NBFCs prove that the AA framework is widely being integrated across products such as personal loans, credit cards and underwriting of term life insurance illustrating its elasticity and effectiveness. As ecosystem participation is growing, the number of FIUs and FIPs are also increasing, as shown in Figure 3.

Figure 3: Growth in AA Ecosystem Participants



Source of data: Sahamati Ecosystem Dashboard (2025); Reserve Bank of India (2024), Bulletin on Digital Financial Infrastructure Developments.

The study aims to break down a fast-changing, layered environment in clear detail. After this opening part, the review of past work pulls together insights from scholarly articles and real-world reports about financial access, open banking, plus how the AA system works. For methods, a blend of approaches explains how numbers and personal feedback are gathered at once. Findings split into three distinct chunks - each focused on one area: small businesses, micro-lending groups, or individual loans. To wrap up, the final thoughts tie everything together, showing what could happen if the model evolves as hoped across India; they also point out roadblocks ahead, possible upsides moving forward, while suggesting rules that might help the framework truly deliver on its goal here.

METHODOLOGY AND DATABASES:

1. Research Methodology

This study will be a mixed-method study by involving both quantitative and qualitative data to offer an impressive and strong analysis. A multi-sectoral study is impossible without this, since it will be possible to conduct a large-scale statistical analysis and gain a deeper insight into the experience of the various user groups.

1.1 Research Design

- **Sequential Explanatory Mixed-Methods Design:** The research will be structured in two phases.
 - **Phase 1 (Quantitative):** A big data survey will be done to collect information concerning the adoption, use and perceived benefits of the AA framework among the three target groups (MSMEs, microfinance borrowers, and personal loan applicants). Key trends and correlations will be determined statistically.

Phase 2 (Qualitative): The second phase will be based on the quantitative survey results. A smaller purposively

selected sample of the stakeholders will be interviewed through in-depth interviews (IDIs) and focus group discussions (FGDs) to understand the reasons behind the quantitative findings. This will give detailed information about the problems, opportunities, and experiences of the users.

1.2 Sampling Strategy

- **Target Population:** The research will focus on three key user segments in India:
 1. **Micro, Small, and Medium Enterprises (MSMEs):** Businesses that have either sought a loan or are interested in using the AA framework to manage finances.
 2. **Microfinance Borrowers:** Individuals or groups (e.g., Self-Help Groups) who have borrowed or sought to borrow micro-loans by institutions under AA framework.
 3. **Personal Lending Applicants:** Individuals or Customers that have sourced personal loans via banks or Non-Banking Financial Companies (NBFCs) falling under the AA ecosystem as a Financial Information User (FIU).

- **Sampling Method:**

Quantitative Phase: The sampling will be done through a stratified random method in order to come up with sufficient representation of all three target segments. A statistical formula will be used to calculate the sample size in order to attain a desired level of confidence and level of error. The sampling population may be based on the clients of the willing FIUs and FIPs.

Qualitative Phase: The purposive sampling method will be taken. The participants in the IDIs and FGDs will be identified using their responses in the quantitative survey (e.g., early adopters, non-adopters, those who reported the major benefits or difficulties). Financial

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Information Providers (FIPs) and Financial Information Users (FIUs) key stakeholders will also be interviewed in order to get an institutional view.

1.3 Data Collection Instruments

- **Quantitative:** A structured questionnaire will be developed and administered will be available as online surveys or in an application through the mobile platform. The questionnaire will include:
 - **Demographics:** Age, gender, location (urban/rural), income level.
 - **AA Usage:** The level of AA awareness, adoption rate, usage rate and type of financial products used.
 - **Perceived Impact:** The questions will be shown as Likert scale questions to assess the changes in the speed of loan approval, rates, loan amount, and overall convenience of the process.
 - **Challenges:** Questions related to Trust issues, concerns of data privacy, technical issues, and awareness issues will be raised.
- **Qualitative:**
 - **In-depth Interview (IDI) Guide:** Semi-structured guide used in interviewing the representatives of FIU/FIP and the early adopters. The questions will be directed to the strategic decisions to implement AA, operational issues, perceived competitive advantages, and outlook.
 - **Focus Group Discussion (FGD) Guide:** A guide to the discussion with the owners of the MSMEs and microfinance borrowers. The questions will be structured in such a way to investigate group dynamics, what groups share, and socio-cultural issues that affect trust and adoption.

1.4 Data Analysis

- **Quantitative Analysis:** Statistical software (e.g., SPSS, R, Python) will be applied.
- **Descriptive Statistics:** To describe the data (e.g., adoption rates, demographics).
- **Inferential Statistics:**
 - **Chi-square tests:** To analyze the association between the categorical variables (e.g., the adoption rate and business size).
 - **T-tests or ANOVA:** To compare means across different groups (e.g., average loan processing time for AA users vs. non-AA users).
 - **Regression Analysis:** To identify how AA adoption is related to the main financial inclusion outcomes (e.g., the loan amount, the loan approval time).
- **Qualitative Analysis:** Thematic analysis style will be employed to analyze the interview transcripts and FGD notes. This will involve:
 - **Coding:** Extraction of major themes, ideas and trends in the data.
 - **Theme Development:** The codes are put into more general themes in relation to trust, convenience, financial literacy, and the effects on financial decision-making.
 - **Triangulation:** Integrating the qualitative findings with the quantitative results to provide a holistic and well-supported conclusion.

2. Databases and Data Sources

Access to reliable and comprehensive data is critical for a study of this nature. This research will be based on both the primary and secondary sources of data.

2.1 Primary Data Sources

- **Custom Survey Data:** This will be the primary source of primary data, which will be obtained through the structured questionnaires to be offered to the target segments.
- **Interview/FGD Transcripts:** The transcripts will give the essence of qualitative information.
- **Collaborative Data from FIUs/FIPs:** In case a partnership is feasible, regulated financial entities would potentially be able to supply anonymized and aggregated data on:
 - Disbursed number of AA-enabled loans.
 - Average size of loan ticket in AA and non-AA customers.
 - Loan approval time for AA vs. non-AA applications.
 - Demographic and geographical data of AA users.

2.2 Secondary Data Sources

- **Official Reports & Publications:**
 - **RBI:** Reports and circulars on the AA framework and digital lending.
 - **Sahamati (Collective of the AA Framework):** Public reports regarding the implementation and adoption of the AA ecosystem, including data on the number of accounts linked and consents fulfilled.
 - **SIDBI (Small Industries Development Bank of India):** Reports like "MSME Pulse" which provide insights into the MSME lending landscape.
 - **Reserve Bank of India (RBI) Financial Stability Reports:** These reports often carry information and remarks on financial inclusion, digital payments, and the condition of the banking sector and NBFCs.
 - **National Bank for Agriculture and Rural Development (NABARD):** Reports of Microfinance and SHG-Bank Linkage Programmes.
 - **Ministry of Finance, GoI:** Publications on schemes and initiatives for MSMEs and financial inclusion.
 - **Invest India:** Articles and reports about digital infrastructure and open finance in India.
- **Credit Bureau Data (Aggregated):**
 - Although there is no individual level information available, aggregated information of credit bureaus such as **CIBIL, Experian, or Equifax** can be applied in order to see macro-trends in lending to MSMEs and personal loan customers and possibly compare the credit profile of new-to-credit customers irrespective of the presence of the AA framework.
- **Industry and Research Databases:**
 - **Fintech Association for Consumer Empowerment (FACE):** Their reports on the state of digital lending and alternative data can be considered useful.
 - **Consulting Firm Reports:** Open banking, Fintech, and digital transformation Consulting firm reports on

open banking, fintech, and digital transformation in the financial sector of India (PwC, BCG, or McKinsey).

- **Academic Databases:** Financial inclusion, fintech and the Indian economy Research papers and articles of journals located on such platforms as **JSTOR, Google Scholar, ResearchGate or Scopus.**

Through such a meticulous approach and employment of such databases, the research article can present an evidence-based and balanced analysis of the effect of the AA framework on financial inclusion in India in various and significant sectors.

LITERATURE REVIEW

1. Introduction: The Evolution of Financial Inclusion and India's Digital Public Infrastructure

Financial inclusion is the ability of individuals to access banking services regardless of who they are – and it's important for emerging markets. It's been proven around the world to be tied to lifting people out of poverty, advancing women's rights, and more predictable economic growth (World Bank, 2017). India, with its hundreds of millions of diverse needs, has long struggled to extend formal financial tools to all. But linking Jan Dhan bank accounts, Aadhaar IDs, and mobile phones created a digital platform that enabled mass delivery for the first time, (Niti Aayog, 2020).

Recently, India's finance ministry and central bank have pushed new digital instruments – particularly UPI and the Account Aggregator system. While UPI revolutionized online payments, the AA framework has the potential to disrupt lending by allowing an expanded set of users access to financial records. This review draws together research on inclusive banking, tech-driven lending, and nascent discussions on AA. It provides the basis for considering how such a framework might influence performance (and the ensuing sector-specific implications) when applied to small business, microlending, and individual credit.

2. Financial Inclusion in India: A Review of Pre-AA Challenges

Prior to the AA framework, research highlighted significant hurdles in extending formal credit, particularly to underserved segments.

2.1. The MSME Credit Gap

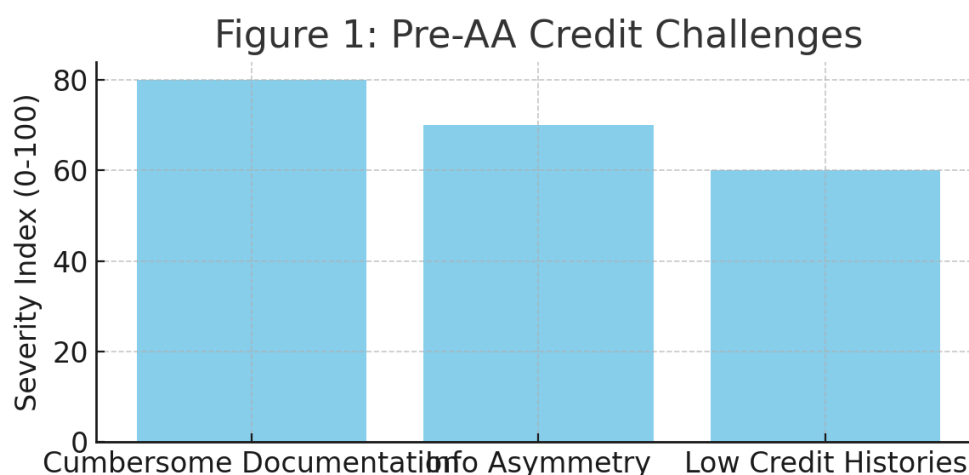
MSMEs are the foundation of Indian economy and make a substantial contribution to GDP and employment. Nevertheless, they are confronted with a persistent financing gap, which the IFC has estimated as exceeding \$380 billion (IFC, 2018). The main factors found in the literature are as follows:

- **Informal Operations:** Several MSMEs operate informally without any formal financial records or audited financial statements (Mohan & Thussu, 2016).
- **Information Asymmetry:** There is substantial information asymmetry between lenders and borrowers which prevents the former from making precise evaluation of the latter's creditworthiness. This results in aversion to risk and loan models based on collateral (Ghosh, 2019).
- **Cumbersome Documentation:** The manual process of gathering bank statements, GST filings and tax returns is onerous for both the lender and the borrower and also poses a high entry barrier (FICCI, 2021).

2.2. The Microfinance and Personal Lending

Situation: There has been growing outreach of self-help group (SHG) and microfinance institution (MFI) models, but credit decisions are driven by social collateral in groups rather than individual financial history. The RBI has done studies demonstrating the need for a more data-driven approach to make micro-lending more effective and scalable (RBI, 2018). Similarly, in the case of personal loans, borrowers with a thin or no credit history are either denied credit or charged exorbitantly high rates of interest. Traditional credit scores are indeed important to lenders, as they tend to not capture the full financial behavior of a large section of the population, particularly the unbanked or underbanked (Basu, 2021).

Figure 1: Pre-AA Credit Challenges



Source: Adapted from IFC (2018), FICCI (2021), RBI (2018)

3. Fintech in the Rise and the Requirement of a Unified Data Infrastructure.

In the past decade, there has been a swift expansion of fintech lending based on the utilization of digital technology and non-traditional data to disrupt conventional lending models. Research on Indian fintech lending has suggested that such lending would reduce loan processing time and increase the reach (Sinha and Goel, 2021). That being said, there are legitimate downsides discussed in the literature.

3.1 Fragmented Data Access:

Fintech lenders had also often turned to screen-scraping or manual data gathering, raising substantial privacy and security concerns (Mehta, 2022).

3.2 Lack of Standardization:

The lack of a uniform standard for sharing data led to a splintered environment in which each lender-borrower transaction was a silo.

3.3 Consent and Privacy:

Unregulated data collection posed a severe risk to user privacy and consent, and a more comprehensive protection framework is needed. The presented work above also stressed the immediate need for a regulated, secured, and consent based data-sharing framework.

4. The Account Aggregator Framework: The AA framework that was introduced in 2021 is the Indian answer to this. It is an open model of financial information sharing and it allows people and businesses

to own their data. Background theoretical underpinnings of the AA framework can be dealt with from two primary angles:

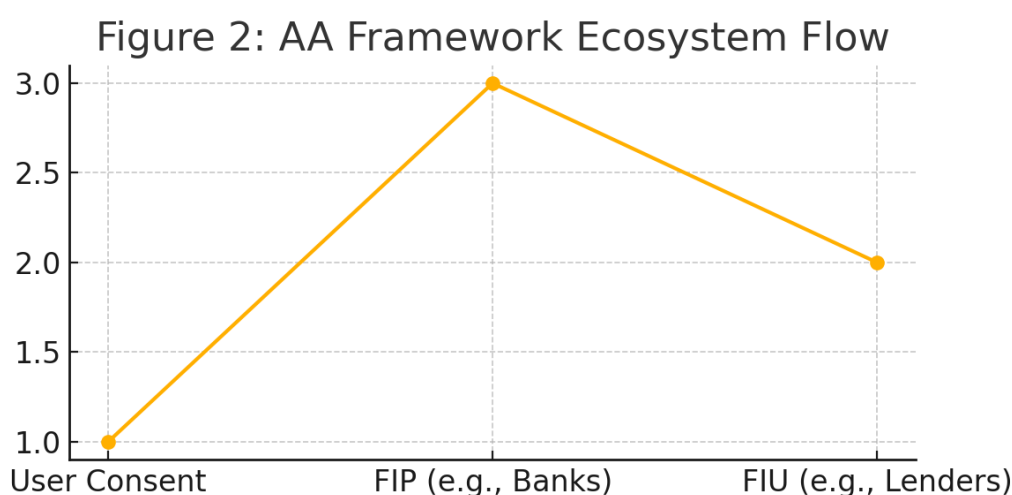
4.1 Data Empowerment and Protection Architecture (DEPA)

AA is a foundational layer within the broader DEPA and is built on the premise that individuals are at the centre of their data-sharing journey (Nandan Nilekani Committee, 2019). Studies on DEPA emphasize the transition from data as a product to data as a right, in which people will digitally and securely share their data with institutions of their choice. It is founded on principles of user consent, data minimisation and an adequate grievance redressal mechanism (Ramachandran, 2021).

4.2 Open Banking and Network Effects

In comparison with the other open banking models from across the world (e.g. the UK and Europe) the AA framework is a uniquely Indian conception of open banking. While international norms generally require the sharing of data, the AA model is consent-based and belongs to an even wider API-driven economy (Goyal and Srivastava, 2022). According to the literature on network effects, the network value will grow exponentially by the number of Financial Information Providers (FIPs, which are banks, mutual funds, insurers) and Financial Information Users (FIUs, which are lenders, wealth managers). This would spur off a vicious cycle of more data going around, more revision, and novelty undertaken by users.

Figure 2: AA Framework Ecosystem



Source: Adapted from Sahamati (2022), Goyal & Srivastava (2022)

5. Transformative Potential of the AA Framework:

While empirical study on the impact of the AA framework itself is at its infancy as the framework is still new to the market, theoretical work as well as initial reports provide solid predictions on the transformative potential effects of the framework.

5.1. Impact on Lending for MSMEs:

Diminished Time to Disbursing Loan: The approval and disbursement time of the loans will get reduced substantially with this framework considering there will be no manual documentation involved (KPMG, 2022). **Better Credit Underwriting:** Lenders can lend based on

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cash flows rather than collaterals, enabling them to extend credit to more first-time borrowers (PWC, 2021). Low Interest Rates: Also, it is believed that the competitive interest rates among lenders will induce reduction in information risk that may results in lower interest rate income for creditworthy MSMEs.

5.2. Effect on Microfinance and Personal Lending:

New-to-Credit Segment: The (AA) framework provides a different data trace for individuals without any formal credit history which helps lenders to make data-driven decisions while also enabling them to reach out to a larger segment of the population (Sahamati, 2022). **Lenders Getting to Lend at Lower Costs:** The cost of running a digital rather than manual data collection will probably mean that the cost of operating MFIs and personal lenders will decrease, potentially a saving that could be passed on to the consumer. Digital Financial

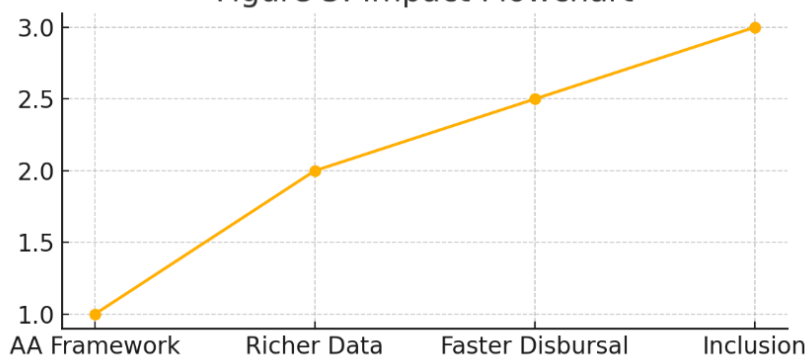
Footprint: To microfinance borrowers, the data on their transactions via the AA framework can enable the creation of a digital financial footprint that will enable them to gain access to a larger array of financial products in the future.

5.3. Challenges and Risks:

It does seem to be a positive outlook but there are possible hurdles in the way towards it which are indicated by the literature. The functionality of the framework relies on: User Awareness and Trust: Certainly the majority of the population is not that aware of the framework. Trust and Privacy Issues are most challenging to address in an online data sharing solution (Deloitte, 2022). Technical Integration: Integration at the infrastructure-level between AA and FIPs and FIUs is a gradual process.

Figure 3: Impact Flowchart

Figure 3: Impact Flowchart



Source: KPMG (2022), PWC (2021), Sahamati (2022), Deloitte (2022)

6. Conclusion and Research Gap

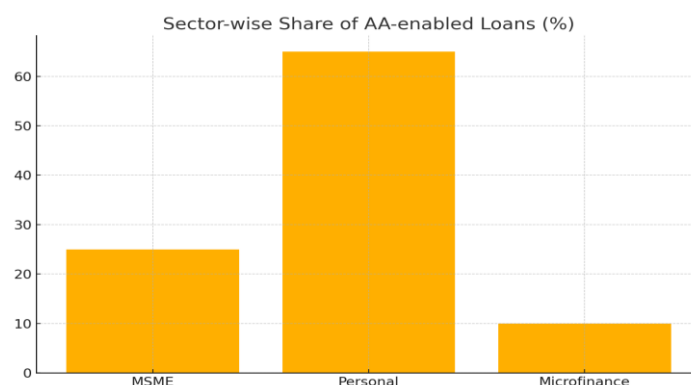
The AA literature to date is a solid theoretical foundation. It discusses the background of the challenges prevailing in the Indian financial inclusion space and the need for a cohesive, consent- based model for data sharing. However, the empirical evidence is still very limited. while they are best known/most cited/our study site is only one study), no multi sectoral are available, which are on impact and measure:

- Whether faster loan processing, better underwriting of borrowers, and lower interest rates really result in higher quality lending

- Whether increased access reflects increased outreach (given limited ability of banks to handle many more high-risk rural borrowers)
- Whether increases in access to credit from new lenders complements or substitutes access from established lenders (given multitricity of lenders is high in Indian rural credit system)

The research paper seeks to address this gap of essential importance by giving a multi-sectoral study approach with a focus on a mixed-methodology approach to prove empirically the transformational role of the Account Aggregator framework in financial inclusion in India.

Figure 4: Sector-wise Share of AA-enabled Loans



Finding: Adoption, Hurdles and Impact of the Account Aggregator Framework.

1. Micrometric adoption and usage of the AA Ecosystem.

The Account Aggregator (AA) infrastructure, since its initial public launch in September 2021, has evolved from a small pilot into a high-throughput digital public infrastructure layer. The publicly available data from Sahamati, Ministry of Finance and press releases indicates that we have three distinct patterns namely, (i) Exponential growth in successful consents, (ii) Increasing FIP's (Financial Information Providers) and FIUs (Financial Information Users), and (iii) Increasing use of AA data for lending in MSME and retail in particular.

The essential stages in the ecosystem are:

- More than 100 million successful consents on the AA framework by July 2024 with nearly 80-90 million unique users (roughly 8% of India's adult population).

- The ecosystem map predicts a successful consent of 150 million plus; 170 active FIPs, 600 FIUs plus by 2024-2025; and a growth of 700+ regulated parties in Banking, NBFCS, Insurance, Mutual Funds Sustaining.
- More than 2.2 billion financial accounts are enabled to share AA based data in a secure manner and an estimated 110-115 million users have linked at least one financial account: By 2025 under a Ministry of Finance update.
- From September 2021 to March 2024, AA-enabled lending witnessed loans being disbursed to the tune of ₹ 88,700 crore, consisting of 9.7 million loans, off which 25% was attributable to MSME (majority of which were solo proprietors).
- Credit under AA Based loans crossed a staggering value of over Rs 1.6 lakh crore in 2024-25 alone, and completed almost 1.9 crore loan accounts, clearly indicating that AA is not a trial run but a mainstream structure of digital credit.

Metric	Period	Value (approx.)	Source (Public)
Successful consents	Aug 2024	100+ million	Sahamati ecosystem update
Estimated users	Aug 2024	80–90 million (≈8% adults)	Sahamati / media reports
Accounts enabled	Sept 2025	2.2+ billion accounts	Ministry of Finance, GoI
AA-linked users	Sept 2025	≈112 million	Ministry of Finance, GoI
Loan value via AA	Sep 2021–Mar 2024	₹88,700 crore; 9.7 million loans	Sahamati Annual Report 2024
Loan value via AA	FY 2024–25	₹1.6 lakh crore; 1.89 crore accounts	Sahamati Impact / media
Share to MSMEs	Sep 2021–Mar 2024	≈25% of AA loan value	Sahamati Annual Report 2024

2. Obstacles and Delivery Problems: Why AA is not a Universal Yet

Even when it comes to adopting figures at the high-end, the AA framework is still in the process of being rolled out, and has yet to be implemented across all banks and financial institutions. The major obstacles are:

- Partial FIP Coverage - While a majority of large state sector and commercial sector banks are live as FIPs, a handful of regional rural banks, cooperative banks, small NBFCS, and a few insurance and pension providers are at various stages of integration. This leading to identifying missing data on majority of

low income users and MSMEs whose major relationship o institution is with smaller entities.

- Core Systems and API Readiness: A significant number of FIPs run on legacy core banking or policy administration systems, which are not, by default, API-ready. In contrast to creating an AA wallet, middle layer upgrades or system build out to meet AA standards across the board requires investment, vendor liaison, and solid technology management.
- Process Change Management: This is even though frontline adoption is slowing down even as technical integration is complete. Branch workers and loan officers, as well as collecting teams, may not

immediately be willing to trust on AA data and understand the consent flows, instead reverting to manual document gathering.

- **User Awareness and Trust Deficit:** AA is a new idea to the vast majority of low-income workers earning salaries, micro entrepreneurs, and microfinance customers. Privacy concerns may delay or limit consent rates, as may data-mining concerns, or fear of hidden fees.
- **Complexity of regulations:** FIPs and FIUs are subject to their respective regulatory authorities in the financial sector (RBI, SEBI, IRDAI, PFRDA). Harmonizing these regulators is challenging, and it needs the convergence of the AA adoption roadmaps, consent artefact standards, and grievance redress regulations.
- **Disparate Use-Case Economics:** In some organizations, such as small MFIs and co-operative banks, the business case for AA (relative to existing low-tech workflows) wouldn't be overwhelmingly convincing, which could delay adoption.

3. How the AA Framework Resolves Its Purpose and Addresses Hurdles

The principle of the AA framework is to reduce transaction information asymmetry and friction and thus to enable the provision of credit to the under-served in a more cost efficient manner. AA, in practical terms, achieves its declared goal in the following ways:

- **Launch of cash-flow Based Underwriting:** AA enables the lenders to move away from the collateral-based and bureau-score-based models in real-time assessment of cash flows, volatility, and resilience.
- **Standardized, Regulated Consent Flows:** A standard consent artefact and technical standard sanctioned by regurs decreses the integration complexity to FIPs/FIUs and builds trust for product the end-users. These users know exactly what information is disclosed, to who, and for how long, as well as the purpose.
- **Decreased Operating Cost and Lowered TA:** Lenders complain that the volume of manual documentation, data entry in back-end and physical verification is going to take a nosedive. It not only drives down the per-unit operating cost of a loan, but also makes it possible for lenders to cater to segments that were earlier unprofitable like low-income, MSMEs and small-ticket.
- **Interoperability of Digital Public Infrastructure:** The AA layer service is woven into Aadhaar e-KYC, UPI, and new credit rails like OCEN. This reduces the friction in the process of finding the first-time borrowers and facilitates branchless, remote service

models. • **Empowerment of users with the data:** Over time, the ability to construct a portable, digital financial footprint owned and controlled by the user will tip bargaining power from institutions to consumers to improve access to credit and prices in the long-run to credit worthy borrowers.

4. Segment - Level Impact: Salaried Low-Income Workers, MSMEs, and Microfinance Clients.

4.1 Impact on Salaried Low-Income Workers

The traditional borrowing process has been associated with exploitation of low-income salaried individuals (such as gig workers, delivery agents, housekeeping staff, security guards, and factory workers) where a physical cut in salary, photocopies of passbook, guarantor, and visits to the branch are standard operating procedures in the lending process. It goes 3 ways for AA:

- **Instant Digital Income Verification:** Instead of uploading or printing the slip, borrowers can consent to share their bank account history with the lender who they receive their salary credit from. This helps to provide justification for income stability even if the employer is small or informal.
- **More Equitable for Thin-File Individuals:** Many low-income earners do not have bureau history or they have extremely thin bureau histories. The analysis of the transactions in terms of AA (frequency of regular credits, utility payments, UPI usage patterns, and so on) enriches the analysis order in assessing ability to pay with respect to a binary bureau score.
- **Reduced Time and No Rewards for Efforts:** Initial surveys and pilots suggest that the fraction of borrowers who want to divulge information through AA to apply for loans is rapidly growing because it is convenient. For the staff who cannot afford to sacrifice a day's wages to make the trip to a branch, these digital AAs will directly reduce their opportunity costs and afford them an increasingly dignified experience in utilizing formal finance.

4.2 Impact on MSMEs

The credit gap has been an enduring issue in MSMEs in the The credit gap in MSMEs has a long history estimated to be around ₹20-25 trillion, and less than 10 percent of units have access to formal credit. AA, combined with OCEN and other DPI layers, bridges this gap when enabling lenders to create highly detailed, cash flow-driven small business profiles:

GST + Bank Data as a Proxy Balance Sheet: For many micro- and small-enterprises, GST returns and current account statements fetched through AA can help financiers infer revenues, seasonality, input cost structure and working capital cycles as proxies to actual financials.

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Working Capital and Invoice Financing at Speed: Lenders will be enabled to underwrite short tenor, small ticket loans (such as invoice discounting, merchant cash advances and just-in-time working capital) based on real-time cash flows, rather than collateral-based lending. It's also good especially for Kirana stores, small traders, and service providers.

Early Indicators of Adoption: As per media reports, the value of AA-enabled loans disbursed to MSMEs (most of them solopreneurs) till March 2024 stands at about a quarter. This suggests that AA has been able to bring its lending mix to the productive and business use cases beyond the consumption credit.

Less Documentation: MSME owners need not make countless PDF statements, bank documents that need to be stamped or hardcopy documents anymore. This can influence when it come first time entrepreneurs who might not have official accounting services.

4.3 Impact on Microfinance and Nano-Entrepreneurs

Group-based methodologies and social collateral in microfinance have traditionally served as substitutes to hard data. While these models are scalable, they do have limitations: they pool risks of borrowing, they are not designed to differentiate risk in borrowing, and they tend to be inflexible as far as designing financial products.

The data empowered by AA could also gradually replace traditional models of microfinance:

- **Personal Digital Footprints:** AA facilitates MFIs and small-finance banks to view the transaction history of individuals (with permission of the client) and extend customized loan, top-up and saving products.
- **Better Risk Segmentation:** MFIs can distinguish between those who maintain positive balances and those who live on a more volatile cash flow and price and limit them accordingly.
- **Responsible Finance and Over-Indebtedness Management:** AA inter-institutional overview (when regulated) could also be used to identify borrowers with multiple active loans to cross-institutionally avoid over indebtedness and improve portfolio quality.
- **Pathway to Graduation:** Microfinance borrowers would witness an expansion in their financial choices over the course of time as they graduate to MSME or retail lending products the rich digital trail they had created through AA.