

Digitisation's Role in Propelling the Indian Retail Standard Assets Direct Assignment and Securitisation Market

An Empirical Investigation Using a Composite Digital Adoption Index, FY2015–FY2025

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Abstract

The Indian retail standard asset direct assignment and securitization market (DASM) has witnessed many ups and downs over the past ten years. With a decent volume of approx. ₹ 43 thousand crore in FY2015, the DASM market grew to ₹268 thousand crore by FY2025. However, this journey experienced two notable setbacks, viz. the IL&FS crisis in 2018 and COVID-induced disruptions in 2020–21. Each of these events caused a visible decline in DASM volume. Nonetheless, the market not only recouped lost ground but also scaled new heights. The current research paper attempts to seek an answer to the most contextually important question as to what propels DASM volume to new heights once the crisis period ebbs. In the quest to find answer, we analysed annual DASM volume with a few digital indicators such as internet penetration, UPI statistics, GSTN data, DPI, and FII, and constructed a normalized Digital Adoption Index (DAI). The DAI increased gradually during the review period, mimicking the DASM growth trajectory. Notably, each one-point DAI increase results in ₹1.60 thousand crore increase in additional annual origination. In a nutshell, the findings emanating from the research underscore the unintended positive consequences of digitisation vis-à-vis DASM volume.

Keywords: Securitisation; Direct Assignment; Digital Adoption Index; Retail Credit; Microfinance; UPI; Account Aggregator; India; Structured Finance.

Disclaimer

The views expressed in the paper are strictly personal and not the views of the Reserve Bank of India. Further, the results and findings in the paper have been formed on the basis of data available in the public domain.

1. Introduction

Securitisation, as we recognise it today, originated as creative solution to a very specific challenge: how could lenders with long-term, illiquid retail assets e.g., mortgages or auto loans, access immediate capital instead of waiting for loans to mature? In the 1970s, U.S. savings-and-loan institutions pioneered mortgage-backed securities to address this dilemma. Domestically, the Indian standard assets direct assignment and securitisation market (DASM) took a different path with direct assignment / securitisation transactions remaining limited to very small set of buyers and sellers initially during 1990s. However, the contemporary regulatory initiatives, viz. RBI's Securitisation Guidelines (RBI, 2025) and Priority Sector Lending (PSL) requirements ensured orderly development of DASM. A closer look at the DASM reveals that the market clocked a volume of ₹43 thousand crore in FY2015, soared to a pre-COVID peak of ₹192 thousand crore in FY2020, then plunged to ₹89 thousand crore in FY2021 due COVID-induced disruptions and regulatory recalibration. Nevertheless, the market rebounded to ₹268 thousand crore by FY2025 with a CAGR of approx. 20%. The conjecture this paper takes seriously is that India's digital public infrastructure has been an underrated explanation for DASM growth. Internet penetration moved from 15 percent of the population in 2015 to around 70 percent by 2025. UPI volumes climbed from a barely-measurable 1.79 million transactions per month in FY2017 to roughly 15.5 billion per month by FY2025. The RBI's Digital Payments Index, with March 2018 set at 100, has nearly quintupled to 493 by March 2025. However, the impact of digitisation on the financial sector, especially DASM, has not been extensively researched in India.

2. Literature Review

2.1 Securitisation Theory and the Indian Context

Real motives of securitisation like risk transfer, capital relief, funding diversification, and asset-liability matching, have been discussed at length by Gorton and Metrick (2012) (Metrick, December 2012) and, previously, in Jobst's (2006) work (Jobst A. , 2006). Adrian and Shin (2010), in their post-crisis work, argue securitisation as leverage creation mechanism in the shadow banking sector, posing systemic stability implications (Adrian, 2010). M. Jayadev & Rudra Narasimha Rao (2012) study securitisation deals in MFIs and the associated issues and challenges (Rao, 2012). P. R. Jayshankar (2009) demonstrates proforma effects of MBS by housing finance companies (Jayshankar, 2009). Manu Prakash (2025) argues that trade receivable securitisation is gaining traction in India (Prakash, 2025).

2.2 Digital Public Infrastructure

William Cook, Dylan Lennox, and Anand Raman (2020) show how the 'Stack' concept helps in (i) financial inclusion through improved ability of identity verification, (ii) managing risk, (iii) conducting transactions, and (iv) sharing personal data (William Cook, 2020). Nik Kamarun (2025) discusses how credit enablers and digital public infrastructure can reduce the finance gap in the case of MSME (Kamarun, 2025). D'Silva, Filková, Packer and Tiwari (2019), demonstrate the role of Indian Public Infrastructure in facilitating smooth credit access to wider public (Derryl D'Silva, 2019).

As far as we have been able to establish, none of these studies has directly connected the DASM volume to digital adoption measures. In this research paper, the researchers relied upon the periodic CareEdge

Ratings updates (formerly CARE Ratings) for DASM volume (CareEdge, 2017). Additionally, RBI's Digital Payments Index (DPI) and Financial Inclusion Index (FII) have also been relied upon (RBI, 2025).

3. Research Methodology

3.1 Research Design and Data

The study uses a quantitative, longitudinal time-series design covering FY2015 to FY2025, giving eleven annual observations. The natural unit of observation is the financial year, which also matches how CareEdge and the RBI publish their data. All inputs are drawn from public sources. Securitisation and DA volumes, including asset-class splits, come from the CareEdge Retail Asset Securitisation reports. Internet penetration is taken from the ITU DataHub. UPI monthly volume and value are sourced from NPCI's product-statistics page and aggregated to annual averages. GST-related digital payments come from the GSTN Eight Years Report. The Digital Payments Index and Financial Inclusion Index are taken from the RBI's annual disclosures. All rupee figures are nominal.

3.2 Construction of the Digital Adoption Index

The DAI uses six indicators and combines them to form a single 0–100 scale. These indicators include internet penetration, UPI average monthly volume in a financial year, UPI average monthly value in a financial year, GST digital payments, and the RBI's DPI and FII. Each of these indicators has peculiar significance. Internet penetration is a proxy for Access, UPI volume and value, GST payments and the DPI represents transactional intensity, and FII denotes inclusion. The composite indicator dilutes the risk of perversion associated with any one indicator.

Building the index takes three steps. We begin by rescaling each indicator to sit between 0 and 1, using the standard min-max formula

$$I_{(i,t)}^{\text{norm}} = (I_{(i,t)} - \min_t I_{(i,t)}) / (\max_t I_{(i,t)} - \min_t I_{(i,t)}),$$

where t is the year index. Next, for each year, we take the simple average of whichever normalised components are actually available rather than imputing zeros. This approach is adopted to avoid artificial downward pulling of DAI as the DPI only begins in FY2018 and the FII only in FY2017. Finally, we multiply the 0–1 score by 100, which puts the DAI on a 0–100 scale that is much easier to talk about.

Equal weights have been used intentionally. While approaches such as principal component analysis or factor-based weighting could be considered, the limited number of observations (only eleven annual data points) does not provide a sufficiently robust basis for deriving stable weights. In such situations, equal weighting is widely regarded as a practical and reliable approach. This is also consistent with the guidance provided in the OECD–Joint Research Centre Handbook on Composite Indicators (2008) (OECD, 2008), which recommends equal weights when working with small datasets.

3.3 Hypotheses and Statistical Techniques

Three null hypotheses are pre-registered.

H1₀: there is no statistically significant association between the DAI and the total volume of DA + securitisation in India over FY2015–FY2025 ($\rho = 0$).

H2o: the slope of DAI in a simple OLS regression of total volume on DAI is zero ($\beta_1 = 0$).

H3o: the microfinance segment of the structured-finance market is independent of digital adoption — specifically, the MFI share of the DA route, and the absolute MFI rupee volume, do not rise systematically with the DAI.

Pearson correlation, Spearman's rank correlation, and OLS regression with diagnostics (R^2 , F-statistic, Durbin–Watson, Jarque–Bera) are used. All tests are two-sided at $\alpha = 0.05$.

4. Data Analysis and Findings

4.1 Volumes and Asset-Class Composition

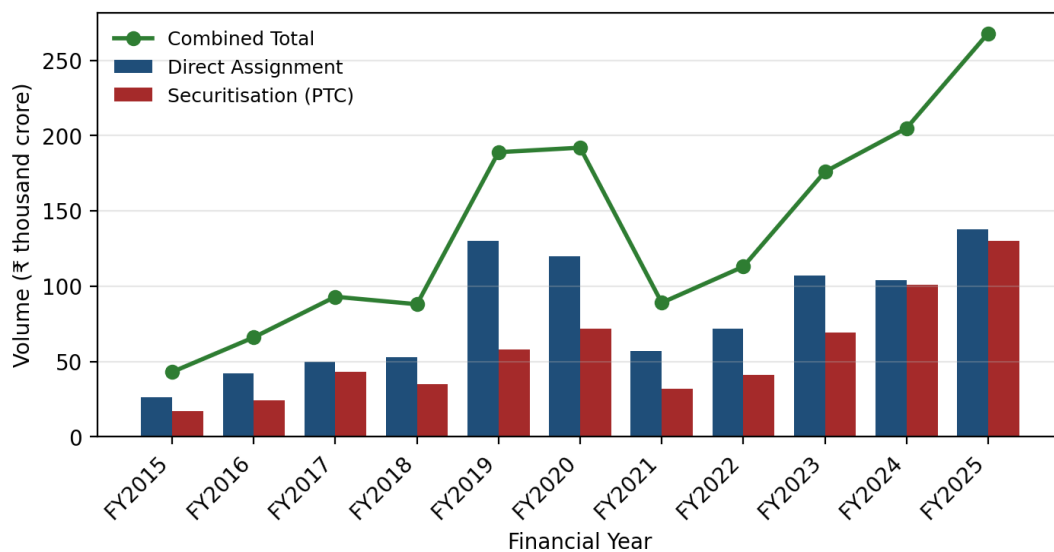


Figure 1: Retail Securitisation and Direct Assignment Volumes, FY2015–FY2025.

The FY2019 jump, in which combined volumes more than doubled from ₹88 thousand crore to ₹189 thousand crore in a single year, reflects two simultaneous forces: the IL&FS crisis, which forced several large NBFCs to liquidate parts of their balance sheets, and the first wave of PSL-driven bank demand in the post-demonetisation period. The FY2021 trough was the pandemic and the regulatory reset combined. The post-FY2022 recovery is essentially a digitisation-era phenomenon.

Table 1: Annual volumes (₹ thousand crore) and asset-class composition.

Year	DA	Sec.	Total	ABS %	MBS %	MFI %
FY2015	26	17	43	59	9	32
FY2016	42	24	66	32	51	17
FY2017	50	43	93	40	50	10
FY2018	53	35	88	41	50	9
FY2019	130	58	189	30	54	15
FY2020	120	72	192	43	47	11

FY2021	57	32	89	55	36	9
FY2022	72	41	113	44	43	13
FY2023	107	69	176	49	34	17
FY2024	104	101	205	53	28	19
FY2025	138	130	268	54	37	9

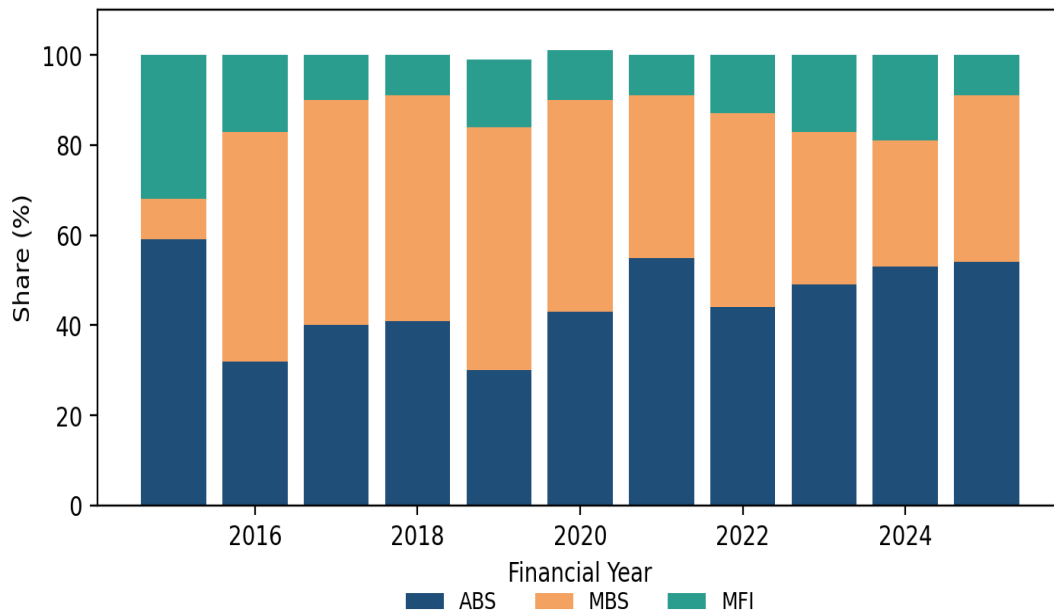


Figure 2: Asset-class composition of combined DA + securitisation pool, FY2015–FY2025.

Figure 2 breaks down DASM volume across the three main asset classes. Asset-backed securities (ABS), largely comprising vehicle and equipment loan pools, have consistently contributed around 40 percent of the total DASM volume and have remained relatively stable over time. Mortgage-backed securities (MBS), comprising retail housing loans MBS dominated DASM volume between FY2016 and FY2020, reflecting strong HFC volumes. However, it has lost its share since as HFC balance sheets adjusted. Microfinance moved the other way. its share rose from below 10 percent in FY2017–FY2018 to around 19 percent by FY2024, with a mild retracement in FY2025.

4.2 The Composite Digital Adoption Index

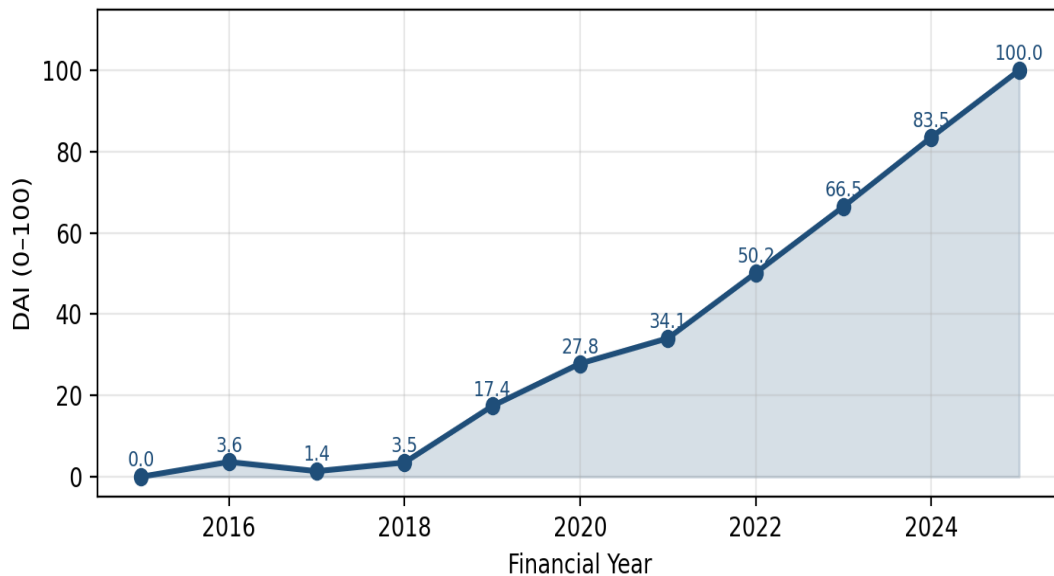


Figure 3: Composite Digital Adoption Index (DAI), FY2015–FY2025.

By construction, the DAI is anchored at 0 in 2015 and 100 in 2025. The trajectory is far from linear. Between 2015 and 2018 the index is essentially flat, reflecting the pre-UPI era. From 2018 to 2020 it climbs rapidly as UPI volumes pick up and the DPI begins publishing. There is a mild pause in 2021 — during which underlying volumes were suppressed by the pandemic but the digital indicators kept climbing — after which the index accelerates again through 2023–2025.

5. Hypothesis Testing

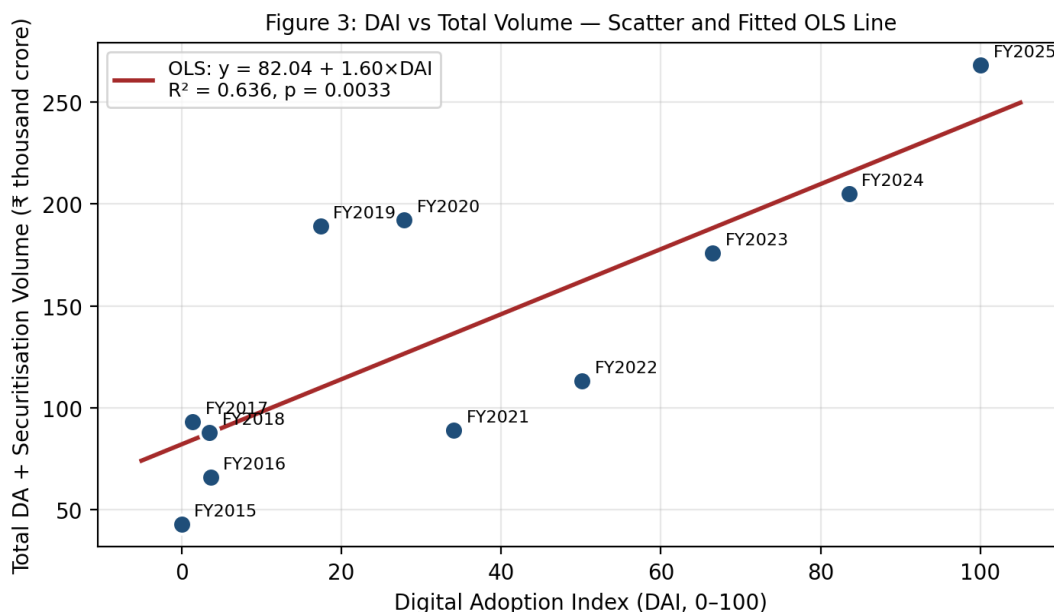


Figure 4: Scatter of DAI against total volume with fitted OLS line.

Figure 4 plots the DAI against total combined volume, with the fitted OLS line overlaid. The Pearson correlation is 0.797 with a two-sided p-value of 0.003. Spearman's rank correlation, computed as a non-parametric robustness check, is 0.782 ($p = 0.004$). The closeness of the two coefficients indicates that the association is not being driven by scale or by extreme observations. H_{10} is rejected at the 1 percent level.

The fitted regression equation is $\text{Total} = 82.04 + 1.60 \times \text{DAI}$, with R^2 of 0.636 and adjusted R^2 of 0.595. The DAI on its own therefore picks up close to two-thirds of the year-on-year variation in combined volumes over the eleven-year window. The F-statistic of 15.71 on (1, 9) degrees of freedom is significant at the 1 percent level ($p = 0.003$). The slope itself is also significant, with a t-statistic of 3.96 ($p = 0.003$) and a 95 percent confidence interval of [0.69, 2.51]. Read in rupees, each one-point rise on the 0–100 DAI scale is associated with roughly ₹1,597 crore of additional annual combined DA + securitisation volume. H_{20} is rejected. Residual diagnostics are satisfactory: the Durbin–Watson statistic of 1.21 falls within the inconclusive region for $n = 11$; the Jarque–Bera test on the residuals does not reject normality.

H_{30} is evaluated along two specifications. The Pearson correlation between the MFI share of the DA route and the DAI returns $r = 0.760$ ($n = 10$, $p = 0.011$), and the correlation between absolute MFI rupee volume and the DAI returns $r = 0.685$ ($n = 11$, $p = 0.020$). H_{30} is rejected on both. Microfinance pools were, through most of the 2010s, the hard-to-sell tail of the Indian securitisation market — institutional investors worried about the quality of field-level collections data, about borrower verification, and about the seasoning of joint-liability-group exposures. Under the digital stack those frictions have eroded. The MFI share of the direct assignment route rose from under 5 percent in FY2016–FY2018 to 25 percent in FY2024, and absolute MFI rupee volumes transacted through pools roughly sextupled between FY2016 and FY2025.

Table 2: Summary of hypothesis tests.

Hypothesis	Test Statistic	p-value	Decision
H_{10}: $\rho(\text{DAI}, \text{Total}) = 0$	Pearson $r = 0.797$	0.003	Reject
H_{10} (robustness)	Spearman $\rho = 0.782$	0.004	Reject
H_{20}: $\beta_1(\text{DAI}) = 0$	$t = 3.96$	0.003	Reject
H_{30} (MFI%-DA): $r = 0$	$r = 0.760$	0.011	Reject
H_{30} (MFI₹ abs): $r = 0$	$r = 0.685$	0.020	Reject

6. Conclusion

This paper set out to ask a concrete question: how much of the growth in India's DASM over the last decade has been driven by digitisation? The fact is that digitisation's role has been significant according to the evidence. A composite DAI, constructed based on six publicly available indicators, such as internet penetration, UPI activity, GST online payments, and RBI payments and financial inclusion indexes, exhibits a strong and statistically significant relation with overall DASM annual volumes, with a correlation co-efficient of 0.797 ($p = 0.003$). A simple OLS regression yields $R^2 = 0.636$ and a slope of ₹1,597 crore per DAI point.

7. Suggestions

7.1 The pool-level data tape disclosure template may be modified to include AA-consent-status fields, in which case the investor and trustee may confirm the percentage of underlying borrowers on whose data was obtained via consented digital flows.

7.2 The economies of scale in selling a pool become significant as the level of digital standardisation of the underlying origination increases. Those NBFCs not yet transitioned to API-first loan management systems are even slower on their way to off-balance-sheet funding. At book level, treasury teams need to estimate the anticipated change in the average gap-to-sale days as a function of digital-origination share, and input it into their NIM planning.

7.3 For investor, MFI is no longer the poor relative as it was five years ago. Properly modelled expected-loss distributions of MFI pools based on digitally-captured collection histories are getting more competitive, on a risk-adjusted basis, with secured retail segments. It would also be advantageous of the credit committees to re-examine internal rating floors with MFI pools, especially in the case of originators with complete digital loan management stacks.

7.4 Rating methodologies which continue to use monthly Excel-based data tapes have a latent technology risk. APIs that are monitored in this way reduce lag and error rate, which has been piloted by some agencies already. A systematic shift in the industry, which could be orchestrated by SEBI and the Credit Rating Agency Regulations, would trim down on redundancy of practices within the industry.

7.5 PTCs and the listing platforms are those where electronic settlement and viewable secondary trading are permitted. The investor base is growing, so improvements to market infrastructures could narrow bid-ask spreads and expand the demand.

8. Limitations

8.1 It is well worth being stated that there are a few limitations. The number of annual observations is small (eleven). Equal weights are used in the DAI, but the strength of entropy weighting is comfortable.

8.2 The specification is univariate and does not seek to determine a direction of causality. Quarterly frequency data, asset-class-specific regressions, firm-level digital-maturity score and instrumental-variable strategies of using exogenous shocks like demonetisation or the 2020 lockdowns to establish causality would be beneficial to future work.

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