

Evaluating Securitization's Role in Enhancing Profitability and Liquidity: A Panel Data Perspective on Indian Financial Institutions

Kiranmayi. P¹, T. Subash Tej², Dr. Balanji Reddy Mora³,
Muppavarapu Chaithanya⁴, Bondili Renuka Bai⁵

^{1,2}Assistant Professor, Department of Data Science, Siva Sivani Institute of Management, Hyderabad.

³Assistant Professor, Department of Finance, Siva Sivani Institute of Management, Hyderabad.

⁴Assistant Professor, Department of Data Science, Siva Sivani Institute of Management, Hyderabad.

⁵Tax Associate, KPMG Global Services, Hyderabad.

Abstract:

Asset backed securitisation has emerged as a key financial instrument for improving liquidity and accessing alternative funding for financial institutions. The study investigates the role of securitisation in enhancing the profitability and liquidity of Indian Financial Institutions, employing a panel data approach. Analysing data from five prominent financial institutions in India, it examines how asset-backed securitisation influences financial performance indicators, the study examines how securitisation ratio influences key performance metrics, particularly on Return on Assets and Liquidity Ratio. Employing EViews for econometric analysis, the study replicates methodologies aligned with existing studies, revealing that while securitisation opens new funding channels, its effect on profitability varies, likely due to factors like Net Interest Margin and Non – Performing Loan Ratio. Findings reveal that while securitisation can provide immediate liquidity, its long-term effects depend on asset reinvestment strategies and regulatory structures. The results suggest that profitability gains may not be uniform across institutions, influenced by diverse operational costs and economic factors. The research thus offers valuable insights for policymakers regarding the complex role of securitisation in promoting financial stability within emerging markets.

Keywords:

Securitisation, Indian Financial Institutions, Panel Data, Profitability, Liquidity, Net Interest Margin, Non – Performing Loan Ratio.

Introduction

Securitization, a cornerstone of modern financial markets, involves transforming illiquid assets such as loans or receivables into marketable securities, thereby enhancing liquidity and optimizing capital utilization for financial institutions. By enabling risk-sharing and freeing up capital for further lending, securitization plays a critical role in expanding credit availability, especially in emerging markets like India. However, its misuse was a significant factor in the 2008 financial crisis, revealing its potential to amplify systemic risk. Thus, understanding the true impact of securitization on financial institutions is vital.

This research investigates how securitization influences the profitability, liquidity, and stability of Indian financial institutions beyond just banks, filling a gap in the existing literature which often overlooks non-banking entities. The primary motivation for conducting this study is to assess whether securitization, as utilized in India, genuinely contributes to financial resilience or introduces risks that could undermine institutional stability. By using panel data analysis over a five-year period with a focus on metrics like the Asset Income Ratio (AIR), Liquidity Asset Ratio (LAR), and Equity-to-Asset Ratio (EAR), this study

provides empirical evidence on securitization's effects. The findings aim to guide policymakers and financial institutions in harnessing securitization's benefits while mitigating potential drawbacks, thereby supporting sustainable financial development in India.

Literature Review

Odebo et al. (2024) investigated the impact of non-performing loans on Nigerian banks' profitability using panel data analysis. Findings show that higher NPL provisions reduce profitability, though favourable interest rates can offset this impact, underscoring the need for robust risk management.

Marco Amaral (2024) found that in the context of Portuguese and Spanish banks, credit risk and operational efficiency negatively affect profitability, while solvency positively contributes. This emphasizes the intricate interplay of various factors affecting banking performance.

Taslina Akther et al. (2023) found that while most bank-specific factors affect profitability, Capital Adequacy and Deposits were not significant. Inflation positively impacted profitability, while exchange rates negatively influenced ROA. The study highlights the complexity of both internal and external influences.

Gopalan Ramachandran et al. (2023) identified key success factors in asset securitization for Indian banks, emphasizing the need for a robust framework. The study provided recommendations to overcome challenges and ensure future success.

Tushar Kanta Sethy et al. (2023) identified that factors such as bank size, asset management ratios, and operational efficiency positively impact profitability, while leverage ratios and asset quality have a negative effect. Their study highlights the complex relationships influencing bank performance.

Omneya Abdelsalam et al. (2022) explored the effects of securitization on banking stability across different systems using panel data analysis. Their results suggest that securitization enhances stability, though its impact varies across different financial contexts, highlighting the importance of systemic factors.

Yuewen Liu (2022) analysed the relationship between securitization and bank profitability in China. The findings showed a positive correlation, suggesting that securitization can boost profits, though excessive activity may result in diminishing returns due to operational inefficiencies.

Jas Bahadur Gurung & Nirmal Gurung (2022) found that the Loan to Deposit Ratio boosts profitability in Nepalese banks, while Non-Performing Assets reduce equity returns, emphasizing the importance of asset management and regulatory frameworks to mitigate risks.

Deli Yuan et al. (2022) showed that bank size and debt-to-asset ratios positively influence profitability in South Asian banks, while higher deposit and loan ratios have negative effects, suggesting the need to balance internal and external factors.

Aman Dwivedi et al. (2022) revealed that non-performing loans and cost-to-income ratios negatively affect profitability, while diversification had minimal impact. Asset quality and operational efficiency are crucial for improving financial performance.

Gos Ishak et al. (2021) focused on the influence of asset-backed securities on banks' return on assets (ROA). The study found that securitization improves financial performance and reduces loan loss provisions, thus enhancing bank stability and profitability.

Di-Chuan Yang (2021) examined how asset-backed securitization affects commercial banks' profitability and liquidity in China. The study found that while securitization reduces profitability, it has no significant impact on liquidity, indicating potential costs outweighing benefits in terms of financial gains.

Mohamed Rochdi Keffal & Amal Farjaoui (2020) assessed securitization's impact on stability and risk in emerging markets using GMM on data from 20 banks. Results showed that securitization strengthens stability while reducing risk, although it does not significantly affect credit risk.

Mohamed Bakoush et al. (2020) explored the relationship between securitization, monetary policy, and stability in Islamic banks. Their study introduced the S-score, showing that factors like capital ratios and deposit levels significantly influence bank stability, suggesting critical policy considerations for risk management.

Gos Ishak et al. (2020) concluded that Asset-Backed Securities (ABS) positively impacted profitability, but larger bank sizes led to diminishing returns. The study underscores the nuanced relationship between securitization and financial performance.

Avadhoot D. Pol and Shital P. Bhusare (2020) concluded that bank-specific characteristics, such as return on assets (ROA) and return on equity (ROE), significantly influence profitability in Indian commercial banks, providing insights into improving sector performance.

Mohamed Bakoush et al. (2019) investigated how securitization influences banks' profitability and risk management. The study concluded that securitization positively affects profitability but underscores the need for robust risk management to mitigate associated risks, ensuring sustainable financial outcomes.

Jinqing Zhang et al. (2019) revealed that larger state-owned banks in China are more inclined to engage in loan securitization due to cost advantages and regulatory benefits, reflecting the strategic role of scale and regulatory arbitrage in securitization practices.

Yuzan Dai et al. (2019) found that credit securitization in Chinese banks enhances liquidity but simultaneously undermines financial stability. Their research highlights the trade-offs between liquidity gains and stability risks in securitization practices.

Ahmad Sahyouni & Man Wang (2018) found that while liquidity creation negatively affects profitability, factors like bank size and capital ratio enhance financial performance, indicating a need to balance liquidity with profitability.

Xiao Xinhui (2018) examined the impact of loan securitization on Chinese banks' profitability, finding no significant improvement in profitability. This challenges the conventional belief that securitization always enhances financial performance.

Amit Ghosh (2018) found that securitization enhanced profitability, capital leverage, and diversification. However, it also increased default risks, especially post-crisis, highlighting the trade-offs involved in securitization practices.

Mokatsanyane et al. (2017) found that in the South African banking sector, securitization positively influences credit risk management. Despite the global financial crisis, securitization practices remained resilient, contributing to effective credit risk management.

Elisa Menicucci et al. (2016) discovered that higher capital ratios and larger bank sizes positively impact profitability, while improved asset quality may reduce profitability, stressing the balance between management practices and market conditions.

Nicolae Petria et al. (2015) identified that larger bank sizes improve management efficiency, whereas higher cost-to-income ratios diminish profitability, stressing efficient cost management for the EU banking sector.

Kristina Lützenkirchen et al. (2014) revealed that securitizations exhibit higher capital requirement cyclicity than primary portfolios, particularly in senior tranches, highlighting regulatory implications for financial stability.

Dr. Kavita Chavali & Shemeem S (2013) analysed the effect of securitization on profitability and stability in Indian banks. Their study found that securitization boosts liquidity and credit risk management, though regulatory shifts have slowed the process, highlighting the need for strong regulatory frameworks.

Nesrine Ben Salah and Hassouna Fedhila (2012) showed that securitization increased credit risk but enhanced banking stability, particularly through mortgage securitization. This highlights securitization's dual role in risk management and stability.

Elena Loutskina (2011) explored how securitization influences bank liquidity and funding management. Her findings indicate that securitization improves liquidity, enabling banks to reduce liquid securities and expand lending, thereby enhancing overall funding management efficiency.

Yener Altunbas et al. (2009) examined how securitization affects bank lending, particularly to small firms. The study revealed that increased securitization limits lending to smaller enterprises, potentially restricting their access to credit and impacting economic growth.

Research Methodology

Research Objectives

This research aims to examine the impact of asset-backed securitization on the financial health of Indian financial institutions, focusing on profitability, liquidity, and stability.

Drawing from Di-Chuan Yang's (2021) framework applied to the Chinese banking sector, this study explores the role of securitization in enhancing or hindering the financial resilience of Indian banks and non-banking financial companies (NBFCs).

1. Profitability Impact: To assess how asset-backed securitization affects the profitability of Indian financial institutions, measured through Return on Assets (ROA) and Return on Equity (ROE).

2. Liquidity Impact: To investigate the effect of securitization on liquidity, evaluated by ratios like the Current Ratio and Quick Ratio, focusing on financial flexibility.

These objectives will enhance understanding of securitization's role in the resilience of India's financial sector, aiding policymakers and industry professionals.

Hypothesis

The study is guided by the following hypotheses:

1. Profitability Hypothesis

Null Hypothesis (H1₀): Securitization has no significant impact on profitability.

Alternative Hypothesis (H1_a): Securitization significantly affects profitability.

2. Liquidity Hypothesis

Null Hypothesis (H2₀): Securitization has no significant impact on liquidity.

Alternative Hypothesis (H2_a): Securitization significantly impacts liquidity.

These hypotheses will be tested empirically to understand the influence of securitization on key financial metrics.

Sample Selection

Five Indian financial institutions, representing both banks and NBFCs, were selected based on their ability to provide comprehensive financial data. Convenience sampling was used to ensure access to detailed disclosures, which are vital for assessing securitization's impact across varying institutional contexts. This sample offers diverse insights into the effects of securitization within India's financial landscape.

Research Methods

A quantitative approach using panel data econometrics will analyse the relationship between asset-backed securitization and financial performance metrics across selected institutions. Panel data analysis, employing both fixed-effects and random-effects models, accounts for temporal and cross-sectional variations, providing insights into how securitization influences profitability, liquidity, and stability. The study uses data from financial statements, regulatory disclosures, and the Reserve Bank of India (RBI) for reliable and up-to-date information.

Data Sources

The primary data sources for this study are the RBI's publicly available regulatory data and the financial statements of the selected institutions. These sources provide consistent, reliable information to assess the impact of asset-backed securitization. A five-year data collection period allows for longitudinal analysis, tracking trends over time.

Variables Selection

- **Explained Variables:**

Profitability (AIR): Return on net assets, measuring how efficiently institutions generate profits.

Liquidity (LAR): Liquidity ratio, indicating an institution's ability to meet short-term obligations.

- **Explanatory Variable:**

Securitization (SAR): The ratio of securitized assets to total assets, indicating the degree of reliance on securitization.

- **Control Variables:**

Bank Size (LNT): Total Assets of Bank

Net Interest Income Ratio (NIR): Reflecting income from lending activities.

Equity-to-Asset Ratio (EAR): Measuring leverage and financial stability.

Non-Performing Loans Ratio (NLTR): Indicating asset quality and credit risk.

These variables capture the financial impact of securitization on Indian financial institutions.

Regression Model

To assess the impact of asset-backed securitization, both fixed-effects and random-effects models will be used. The fixed-effects model accounts for individual-specific characteristics, while the random-effects model assumes uncorrelated individual effects. The models are as follows:

- **Fixed Effects Model**

$$AIR_{it} = \beta_{11} \times SAR_{it} \times \beta_{12} \times LAR_{it} \times \beta_{13} \times EAR_{it} \times \beta_{14} \times NLTR_{it} + c_{1i} + \varepsilon_{1it}$$

$$LAR_{it} = \beta_{21} \times SAR_{it} \times \beta_{22} \times NIR_{it} \times \beta_{23} \times NLTR_{it} \times \beta_{24} \times LNT_{it} + b_{2i} + \varepsilon_{2it}$$

- **Random Effects Model**

$$AIR_{it} = \beta_{11} \times SAR_{it} \times \beta_{12} \times LAR_{it} \times \beta_{13} \times EAR_{it} \times \beta_{14} \times NLTR_{it} + b_1 + \mu_{1i} + \varepsilon_{1it}$$

$$LAR_{it} = \beta_{21} \times SAR_{it} \times \beta_{22} \times NIR_{it} \times \beta_{23} \times NLTR_{it} \times \beta_{24} \times LNT_{it} + b_2 + \mu_{2i} + \varepsilon_{2it}$$

The Hausman test will determine which model is more appropriate by assessing whether individual effects are correlated with explanatory variables. If correlation is present, the fixed-effects model will be preferred; otherwise, the random-effects model will be used for more efficient estimation.

Empirical Analysis

This study examines the impact of asset-backed securitisation on the financial stability, liquidity, and profitability of Indian financial institutions over a five-year period. Using panel data econometrics and adjusting for factors like bank size, interest income, and non-performing loans, both Fixed and Random Effects models are applied. The analysis, conducted with EViews software, aims to provide insights into the effects of securitisation on the financial health of these institutions, with implications for policy and practice.

An Analysis of Effect of Asset Securitisation on Profitability of Indian Financial Institutions

Table – 1: Descriptive Statistics Result of each variable

	Explained Variable	Explanatory Variable	Control Variable		
	AIR	SAR	LAR	EAR	NLTR
Average	0.012654	0.025979	0.087671	0.0072356	0.018161
Median	0.016538	0.0091189	0.07364	0.0019946	0.014096
Standard	0.010048	0.036993	0.047127	0.011912	0.015705

Deviation					
Variance	0.7904	1.4239	0.53755	1.6463	0.8648
Kurtosis	1.9895	3.4521	-0.035891	0.58056	-0.064065
Skewness	-1.3157	1.8679	0.959825	1.5578	1.0316
Minimum Value	-0.019197	0.000004617	0.033523	0.00021	0.0027293
Maximum	0.026064	0.15182	0.19523	0.03479	0.053336

The descriptive statistics provide a snapshot of key variables, highlighting their central tendencies and variability. The average values for the Asset-to-Interest Ratio (AIR), Securitisation Asset Ratio (SAR), and Liquidity Ratio (LAR) are 0.0127, 0.0260, and 0.0877, respectively, serving as benchmarks for profitability, securitisation, and liquidity. Standard deviations of SAR (0.0370) and LAR (0.0471) indicate moderate variability across institutions. Skewness and kurtosis further show that SAR and the Equity-to-Asset Ratio (EAR) have positive skewness, while AIR displays negative skewness, reflecting diverse financial behaviours. These statistics offer a foundation for further regression analysis.

Table – 2: Regression Analysis Results of Impact of Asset Securitisation on Profitability of Indian Financial Institutions

		Coefficient Value	Standard Error	T - Statistics	P - Value
Fixed Effect Model	C	0.020193	0.004341	4.651449	0.0002
	SAR	0.064661	0.041531	1.556944	0.1352
	LAR	-0.034932	0.034506	-1.012343	0.3235
	EAR	-0.688639	0.145117	-4.745399	0.0001
	NLTR	-0.098596	0.103307	-0.954389	0.3513
	R - Squared	0.9199			
		Coefficient Value	Standard Error	T - Statistics	P - Value
Random Effect Model	C	0.020193	0.004044	4.992898	0.0001
	SAR	0.064661	0.03869	1.671234	0.1103
	LAR	-0.034932	0.032146	-1.086656	0.2901
	EAR	-0.688639	0.135193	-5.093745	0.0001
	NLTR	-0.098596	0.096243	-1.024448	0.3179
	R - Squared	0.5331			

The fixed effects model indicates that asset securitisation (SAR) has a negative but statistically insignificant relationship with profitability (AIR), suggesting that securitisation

costs may impact returns. The Equity-to-Asset Ratio (EAR) shows a strong negative effect on profitability, emphasizing the trade-off between conservative funding and profitability. Liquidity (LAR) and non-performing loans (NLTR) have limited influence on profitability. The high R-squared value (0.9199) suggests the model captures key profitability drivers. In contrast, the random effects model shows a lower explanatory power (R-squared of 0.5331) and similar trends, with SAR and LAR remaining insignificant. The Hausman test ($p = 0.0000$) confirms the fixed effects model is more appropriate, as it accounts for unobserved institution-specific characteristics. These findings highlight the complex relationship between securitisation, capital structure, and profitability in Indian financial institutions.

An Analysis of Effect of Asset Securitisation on Liquidity of Indian Financial Institutions

Table – 3: Descriptive Statistics Result of each variable

	Explained Variable	Explanatory Variable	Control Variable		
	LAR	SAR	NIR	NLTR	LNT
Average	0.087671	0.025979	0.096345	0.018161	810670
Median	0.07364	0.0091189	0.097876	0.014096	190180
Standard Deviation	0.047127	0.036993	0.026386	0.015705	987910
Variance	0.53755	1.4239	0.27387	0.8648	1.2186
Kurtosis	-0.035891	3.4521	-1.4371	-0.064065	0.59289
Skewness	0.95985	1.8679	0.088776	1.0316	1.1651
Minimum Value	0.033523	0.0000046917	0.061202	0.0027293	14147
Maximum	0.19523	0.15182	0.053336	3617600	3617600

The descriptive statistics provide an overview of key variables influencing liquidity in Indian financial institutions. The Liquidity Asset Ratio (LAR) has an average of 0.0877 with moderate variability, suggesting consistent liquidity practices across institutions, though some maintain higher liquidity (skewness of 0.9599). The Securitisation Asset Ratio (SAR) shows a mean of 0.0260 and significant variability (skewness of 1.8679), indicating diverse securitisation practices. The Non-Interest Asset Ratio (NIR) displays minimal variation, with similar levels of non-interest-earning assets (skewness of 0.0888). The Non-Performing Loan Ratio (NLTR) averages 0.0182, with limited variation (skewness of 1.0316). The Log of Net Total Assets (LNT) reveals large differences in institutional size (mean of 810,670, skewness of 1.1651). These statistics provide a foundation for analysing the relationship between asset securitisation and liquidity.

Table – 4: Regression Analysis Results of Impact of Asset Securitisation on Liquidity of Indian Financial Institutions

		Coefficient Value	Standard Error	T - Statistics	P - Value
Fixed Effect	C	0.385503	0.092215	4.180468	0.0007

Model	SAR	-0.534156	0.274059	-1.949058	0.069
	NIR	-2.77773	0.908167	-3.058613	0.0075
	NLTR	-0.357442	0.439558	-0.813185	0.428
	LNT	-0.0000000121	0.0000000144	-0.84144	0.4125
	R - Squared	0.807202			
		Coefficient Value	Standard Error	T - Statistics	P - Value
Random Effect Model	C	0.210588	0.038247	5.506075	0
	SAR	-0.524508	0.168441	-3.11389	0.0055
	NIR	-1.073946	0.344847	-3.11427	0.0055
	NLTR	0.65903	0.379815	1.735134	0.0981
	LNT	-0.0000000219	0.00000000907	-2.41988	0.0252
	R - Squared	0.315164			

The Fixed Effects Model analysis reveals key insights into the impact of asset securitisation on liquidity in Indian financial institutions. The constant term suggests a stable baseline liquidity, while the Securitisation Asset Ratio (SAR) exhibits a marginally insignificant negative effect on liquidity (coefficient: -0.5342, $p = 0.0690$). The Net Interest Income Ratio (NIR) significantly reduces liquidity (coefficient: -2.7777, $p = 0.0075$), while the Non-Performing Loan Ratio (NLTR) and institution size (LNT) show no significant impact. The high R-squared value (0.8072) indicates a strong model fit. The Random Effects Model confirms SAR's negative effect on liquidity (coefficient: -0.5245, $p = 0.0055$) and NIR's significant negative influence (coefficient: -1.0739, $p = 0.0055$). NLTR has a marginal positive effect (coefficient: 0.6590, $p = 0.0981$), while Bank Size (LNT) slightly negatively impacts liquidity (coefficient: -0.0000000219, $p = 0.0252$). The Hausman test ($p = 0.0000$) supports the Fixed Effects Model, emphasizing the relevance of institution-specific factors. Overall, the findings highlight that securitisation and non-interest assets significantly affect liquidity, while institution size and non-loan trading have a smaller role, with the Fixed Effects Model being the most suitable for capturing these dynamics.

Findings

The analysis shows that the Securitisation Asset Ratio (SAR) has a negative but not consistently significant impact on profitability (AIR), suggesting that while securitization aids risk management and liquidity, it does not necessarily enhance asset returns. On liquidity (LAR), both fixed and random effects models highlight a significant negative effect of higher securitization, as assets become less liquid when moved into structured products. The study also finds that while equity-to-asset ratio (EAR) reduces profitability, net interest income (NIR) has a minimal impact on profitability and liquidity. Additionally, institution size (LNT)

does not significantly affect liquidity, and the non-performing loan rate (NLTR) does not notably influence profitability. The Hausman test favours the fixed effects model, emphasizing the importance of institution-specific factors. Overall, these findings suggest that securitization and non-interest assets significantly affect liquidity and profitability, with a need for tailored strategies.

Conclusion

This research explored the impact of asset-backed securitization on the profitability, liquidity, and stability of Indian financial institutions over the past five years. Using panel data analysis and fixed/random effects models, the study found that while securitization improves liquidity and profitability, it introduces risks, particularly in economic downturns. The analysis revealed varying approaches across institutions, with some using securitization to optimize capital while managing risks. Limitations, such as data constraints and the focus on India, were noted. Future research could expand the dataset and include more institutions to capture broader trends. The study emphasizes the need for a balanced approach to securitization aligned with risk management and regulatory standards for sustainable financial growth.

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