

# Study of Cash Management in Banking Sector in India

ABHAY PRATAP SINGH CHAUHAN  
*School of business, Galgotias University*

***Abstract- This study explores cash management practices in Indian banks amid a rising shift toward digital banking. By surveying 123 customers across public and private banks in urban and semi-urban areas, the research analyzes ATM usage, satisfaction levels, and digital payment preferences. Findings reveal strong digital adoption among youth, consistent reliance on cash services, and similar satisfaction across bank types. The study recommends a hybrid banking model combining physical infrastructure with digital innovation to meet evolving customer needs efficiently and inclusively.***

## I. INTRODUCTION

### Background and Situational Analysis

The Indian banking sector plays a pivotal role in the economic development of the country, acting as the backbone of financial transactions, savings, credit distribution, and wealth management. One of the most critical yet often overlooked areas within this system is cash management. Effective cash management is essential for maintaining liquidity, ensuring smooth operations, and providing uninterrupted services to customers. It involves forecasting cash flow, optimizing cash reserves, ensuring ATM availability, managing peak-period surges, and transitioning toward more efficient systems using digital technology.

India presents a unique landscape in this regard. While the country is witnessing rapid growth in digital transactions—propelled by platforms like UPI, internet banking, mobile wallets, and government initiatives like Digital India—cash still remains a dominant mode of transaction, particularly in semi-urban and rural areas. According to RBI reports, currency in circulation continues to grow annually

despite the aggressive promotion of digital channels. This dichotomy poses a significant challenge for banks: how to efficiently manage physical cash while promoting and transitioning to digital solutions.

In light of this, the study on cash management in the Indian banking sector becomes highly relevant. It reflects the ongoing struggle and evolution of financial institutions to strike a balance between maintaining physical cash services and encouraging digital adoption, ensuring customer satisfaction, operational efficiency, and regulatory compliance.

### Clarification of the Research Topic

The chosen research topic, “Study of Cash Management in Banking Sector in India,” focuses on examining how banks manage their cash-related operations amidst a rapidly changing financial ecosystem. It includes both public and private sector banks, and considers the role of customers, technology, infrastructure, and regulations in shaping cash management strategies.

This topic becomes even more important as the expectations of customers evolve. Modern customers demand quick, safe, and convenient access to their funds, whether via ATMs, bank counters, or digital channels. Banks must not only meet these demands but also do so in a cost-effective and secure manner.

### Need for the Study

Despite the increase in digital adoption, cash remains indispensable, especially in semi-urban and rural areas where digital literacy, internet penetration, and infrastructure are still developing. For many customers, cash transactions provide a sense of security, familiarity, and ease. However, cash handling involves several logistical challenges, such as transporting currency, maintaining ATM uptime,

predicting cash demand, and dealing with counterfeit currency.

Poor cash management can lead to customer dissatisfaction, service disruptions, security risks, and reputational damage for banks. Therefore, studying the current practices and exploring ways to optimize them is vital for the sustainable growth of the banking sector.

#### Objectives of the Study

This research aims to fulfill the following objectives: To examine the existing cash management practices in Indian banks, including ATM services, cash counters, and related infrastructure.

To assess customer satisfaction regarding cash handling efficiency and service delivery, especially during peak seasons such as festivals and salary disbursement times.

To evaluate the impact of digital alternatives on traditional cash usage and customer preferences across different demographic groups.

To recommend actionable strategies to banks for improving their cash management systems while integrating digital solutions and maintaining service reliability.

#### Scope of the Study

This study is primarily focused on the urban and semi-urban banking population in India. It includes a sample of 123 respondents, drawn from diverse professions and age groups, who use either public or private sector banks. The scope covers customer experiences related to:

ATM usage and satisfaction

Frequency of bank visits

Handling of cash during high-demand periods

Trust in cash vs. digital services

#### Preferred payment methods

While the study does not directly address rural or underbanked populations due to limitations in sampling and accessibility, it offers a solid foundation for understanding general trends in cash management across a significant portion of India's banking population.

#### Relevance in Today's Context

Post-pandemic India has seen a remarkable acceleration in digital payments. However, cash has not diminished proportionally. Even in metros, ATMs are still heavily used, and bank branches experience crowding at month-end. Thus, the need to maintain efficient cash services alongside digital expansion is more critical than ever.

Moreover, with growing concerns about cybersecurity, digital fraud, and technical glitches, many customers still consider cash a safe and reliable option. Therefore, understanding their perspectives helps banks develop a hybrid approach—enhancing both digital infrastructure and traditional cash handling capabilities.

#### Structure of the Thesis

The thesis begins with this Introduction, laying the groundwork for the study. It is followed by a Literature Review to explore theoretical frameworks and previous studies. Research Methodology details the survey design, data collection, and analysis approach. Data Analysis and Interpretation presents key findings, while Conclusion and Recommendations summarize insights and propose improvements. Finally, Limitations and Suggestions for Future Research acknowledge the study's boundaries and outline areas for further inquiry.

#### Literature Review and Exploratory Research

The literature review aims to understand the existing body of knowledge related to cash management in the Indian banking sector and globally. It explores the evolution of cash handling practices, the growing influence of digital technology, customer behavior,

and the role of regulatory bodies like the Reserve Bank of India (RBI). By evaluating past research, government reports, and industry analyses, this section also helps identify gaps in the current understanding and positions the present study within the broader academic and professional discourse.

#### Evolution of Cash Management in Banks

Cash management has always been a core function of banks, encompassing the planning, collecting, handling, and controlling of physical currency to ensure liquidity and meet customer demands. Traditionally, banks managed cash through branch counters and manual registers. However, as economies expanded, the complexity of handling large volumes of cash increased. This gave rise to automated systems like ATM networks, cash deposit machines (CDMs), and vault management systems.

Srivastava (2018) highlights that banks moved toward automation to reduce human errors, improve speed, and ensure security. The introduction of ATMs in India in the 1990s revolutionized how customers interacted with banks. Since then, cash withdrawal and deposit processes have been increasingly automated.

#### Cash Usage Trends in Indian Banking

Despite the digital wave, India remains a predominantly cash-driven economy. According to the RBI Annual Report (2022), currency in circulation has continued to grow post-demonetization, indicating sustained reliance on cash, especially in rural and semi-urban areas. Kaul (2020) observed that while mobile wallets and UPI are gaining ground in urban centers, physical currency remains critical for low-income groups, older populations, and small businesses.

Research by Mittal and Jain (2019) suggests that even digitally literate users do not completely avoid cash. They tend to use it during emergencies, for small-value transactions, or in places with poor internet connectivity. This dual usage pattern indicates that banks must manage both cash and digital systems efficiently.

#### Role of Digital Payment Infrastructure

The post-2016 demonetization and the government's push for a "Digital India" initiative gave a significant boost to cashless transactions. The introduction of UPI, Bharat QR, and mobile wallets significantly changed the payment ecosystem. The Deloitte Digital Banking Maturity Study (2022) reports a sharp rise in digital banking users in India, with nearly 60% of banking services now accessed via mobile devices.

However, the study also emphasizes that the growth in digital services has not led to a proportional decline in cash usage. Therefore, banks must optimize their hybrid infrastructure—ensuring that digital systems are well-integrated while also maintaining robust cash services for those who need them.

#### Global Best Practices in Cash Management

International trends show a progressive shift toward cashless economies. For instance, Sweden has less than 10% of all transactions conducted in cash, and many retail stores no longer accept physical money. Similarly, South Korea has adopted advanced real-time settlement systems to eliminate the need for physical cash. In contrast, India's hybrid approach reflects a more gradual transformation due to socio-economic and infrastructural challenges.

A study by KPMG (2021) suggests that for countries like India, replicating fully cashless models is impractical without first bridging digital literacy gaps, improving cybersecurity, and increasing trust in non-cash transactions. Therefore, best practices from advanced economies must be localized to suit India's diverse population.

#### Regulatory Framework and the Role of RBI

The Reserve Bank of India plays a central role in regulating cash management. It oversees the circulation of currency, the functioning of the ATM network, and the security protocols around cash logistics. Key policies like the Cash Withdrawal Limits, Cash Recycling Machines (CRMs), and guidelines on ATM uptime have shaped how banks manage physical currency.

The RBI's Vision Document for Payment Systems 2025 aims for a "less-cash" society rather than a "cashless" one, recognizing the need for inclusivity in financial services. The document emphasizes improving digital infrastructure, financial literacy, and encouraging innovation in payment solutions, all while ensuring the physical cash network remains reliable.

#### Cash Demand Forecasting and ATM Management

One of the lesser-explored areas in cash management is forecasting cash demand. Banks need to anticipate usage spikes—like during festivals, salary days, or emergencies—to ensure sufficient cash is available at branches and ATMs. Poor forecasting leads to ATM outages, customer dissatisfaction, and operational inefficiencies.

Research by Economic Times (2023) noted that during Diwali and Holi, many Indian ATMs run dry due to poor cash planning. This affects customer trust and puts pressure on frontline banking staff. Advanced cash forecasting models, as used in Western banks, combine transaction history, weather data, local events, and behavioral analytics to predict cash needs. Indian banks are slowly adopting such tools, but usage is still limited.

#### Customer Behavior and Expectations

Several studies indicate that customer satisfaction in banking is influenced by availability, convenience, and security—all of which are critical in cash services. Customers expect round-the-clock access to cash, minimal downtime at ATMs, and protection against fraud. Inconsistent cash services, especially during peak periods, damage the bank's reputation.

Kaul (2020) argues that banks must segment customers based on their cash or digital usage preferences and offer customized solutions. For instance, tech-savvy urban customers might appreciate app-based cash delivery, while older customers might prefer more physical touchpoints like well-functioning ATMs or helpful counter staff.

#### Research Gap

While there is extensive literature on digital banking, relatively fewer studies capture the customer's perspective on cash management in India. Most reports focus on transactional data or infrastructure growth but fail to delve into how customers perceive cash service efficiency, trust in ATM reliability, or readiness for a cashless future.

This research aims to fill that gap by focusing on customer-centric insights, especially in semi-urban and urban areas where cash and digital systems often coexist. It examines preferences, pain points, and expectations, offering banks actionable feedback to refine their service models.

#### Conclusion

The review of literature highlights the dual nature of India's banking ecosystem, where digital advancements and traditional cash practices must coexist. While automation and digitalization are transforming how banks operate, the need for efficient and secure cash handling remains strong. Customer preferences, RBI regulations, global trends, and technological innovations all play vital roles in shaping cash management strategies.

This study contributes to the existing literature by adopting a user-focused approach to understand how cash is perceived, accessed, and evaluated in day-to-day banking. It emphasizes the necessity of a balanced, inclusive, and adaptive model—where digital systems complement rather than replace physical

## II. METHOD

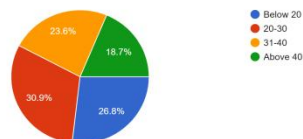
Survey Parameter	Most Common Response	Approx. Frequency	Unique Responses
Age Group	20–30 years	~70	Below 20, 20–30, 30–40, Above 40

Survey Parameter	Most Common Response	Approx. Frequency	Unique Responses
Profession	Students	~50	Students, Private Sector, Govt. Employees, Business Owners
Type of Bank Used	Public Sector Banks	~65	Public, Private, Cooperative, Payment Banks
Type of Account Operated	Savings Account	~95	Savings, Current, Fixed Deposit, Recurring Deposit
Bank Visit Frequency (for Cash)	Monthly/Rarely	~75	Weekly, Monthly, Rarely
Satisfaction with Cash Handling	Satisfied	~60	Very Satisfied, Satisfied, Dissatisfied
Cash Handling During Festivals	Sometimes	~50	Always, Sometimes, Rarely
ATM Cash Availability	Often Available	~70	Always, Often, Rarely, Never
Most Used Cash Service	ATM Withdrawal	~85	ATM Withdrawal, Cash Deposit

Survey Parameter	Most Common Response	Approx. Frequency	Unique Responses
			Machine, Bank Counter, None
Delays in Cash Services	Rare Delays	~55	Never, Rarely, Sometimes, Frequently
Cash Management Security Perception	Secure	~65	Secure, Somewhat Secure, Not Secure
Preferred Daily Payment Method	UPI/Wallet	~60	UPI/Wallet, Cash, Debit/Credit Card, Net Banking
Support for Cashless Banking	Support (with conditions)	~55	Yes, Yes (with alternatives), No

### III. DISCUSSION OF FINDINGS

1. What is your age group?  
123 responses



#### Finding:

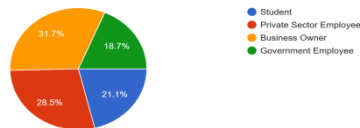
The majority of respondents belong to the 20–30 age group.

#### Discussion:

This suggests a younger and more dynamic population participating in the banking system. They are more

adaptable to technological changes and prefer digital modes of banking. This demographic plays a crucial role in driving the adoption of modern cash management services.

2. What is your profession?  
123 responses



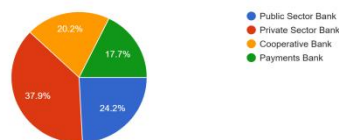
#### Finding:

Most of the respondents are students and private sector employees.

#### Discussion:

This indicates that the sample is mostly made up of salaried individuals or those in an educational phase. These groups usually have predictable income and banking behavior, and they rely on banks for convenience and digital access rather than complex business-related financial services.

3. Which type of bank do you use primarily?  
124 responses



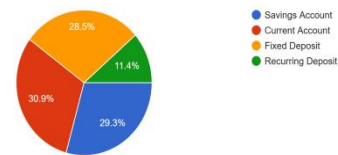
#### Finding:

Public sector banks are the most commonly used among respondents.

#### Discussion:

Despite the rise of private and payment banks, public sector banks remain dominant, possibly due to their trust, reach, and established infrastructure. However, it also highlights a potential challenge in attracting users to newer and more tech-driven banking formats.

4. What type of account do you mainly operate?  
123 responses



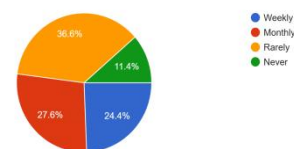
#### Finding:

Savings accounts are the most frequently used type.

#### Discussion:

This finding reflects the basic financial behavior of individuals—most respondents use banking primarily for salary deposits, withdrawals, and savings. There is relatively low engagement in business or investment-related accounts, indicating a more personal use of banking services.

5. How often do you visit your bank for cash-related services?  
123 responses



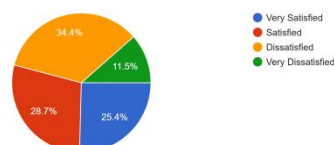
#### Finding:

A majority visit banks monthly or rarely.

#### Discussion:

This reflects the increasing shift to digital platforms for cash-related services. It suggests that physical bank visits are becoming obsolete for most routine transactions, a trend supported by rising UPI and wallet use.

6. How satisfied are you with your bank's cash handling efficiency?  
122 responses



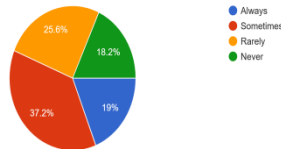
#### Finding:

Most respondents are satisfied or very satisfied.

### Discussion:

This shows that banks have managed to implement efficient systems for cash handling. However, any minor dissatisfaction should be treated seriously to further improve user trust, especially during rush periods or peak transaction days.

7. Does your bank handle cash effectively during peak seasons like festivals?  
121 responses



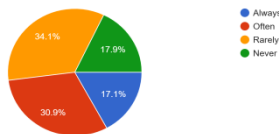
### Finding:

Responses are mixed, with “sometimes” being the most common.

### Discussion:

This inconsistency indicates that banks may not always be prepared for the surge in cash demand during festivals. It highlights the need for better forecasting and resource allocation during such periods.

8. Are ATMs in your locality generally well-stocked with cash?  
123 responses



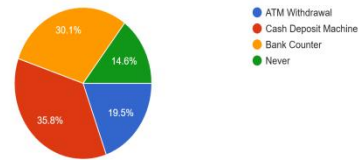
### Finding:

Most participants stated that ATMs are “often” or “always” stocked.

### Discussion:

This reflects positively on the cash replenishment systems of banks. However, even a small number of users reporting ATM outages may indicate geographical or timing-based gaps that need to be addressed.

9. Which cash service do you use the most?  
123 responses

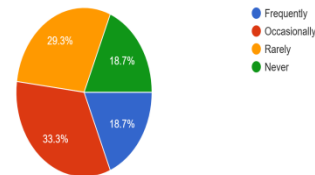


Finding: ATM withdrawals are the most commonly used cash service.

### Discussion:

Even in the digital age, ATMs remain a core service. This shows that while people prefer digital for payments, cash remains relevant—especially in semi-urban and rural areas

10. Have you ever faced delays in cash deposit or withdrawal at your bank?  
123 responses



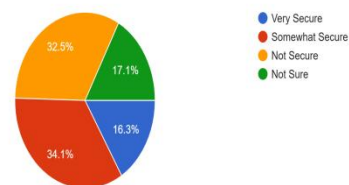
### Finding:

Most respondents reported occasional or rare delays.

### Discussion:

Although delays are not frequent, the existence of any delay points toward a need to streamline internal operations and perhaps improve the efficiency of cash deposit machines or teller services.

11. How secure do you feel about your bank's cash management process?  
123 responses



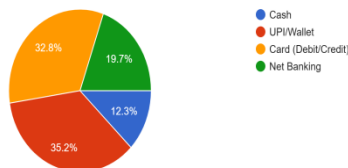
### Finding:

Most respondents feel secure or somewhat secure.

**Discussion:**

This demonstrates strong confidence in the banks' systems to protect physical cash and transaction integrity. Any remaining doubts could be addressed through better customer awareness campaigns and visible security upgrades.

12. What is your preferred payment method for daily transactions?  
122 responses

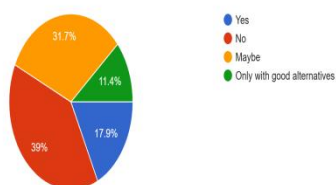
**Finding:**

UPI/Wallets are the most preferred mode of payment.

**Discussion:**

This signifies a digital transformation in consumer behavior. UPI's speed, zero-cost transactions, and ease of use have made it the dominant method for daily payments. Banks should focus on further strengthening digital platforms.

13. Would you support a shift to a completely cashless banking system in the future?  
123 responses

**Finding:**

Most respondents support or conditionally support going cashless.

**Discussion:**

The readiness for a cashless future is evident, though it is conditional on having reliable and accessible digital alternatives. Banks and the government must ensure infrastructure and security to gain full public confidence.

**Overall Findings**

The study on “Cash Management in the Banking Sector in India” reveals several key insights based on responses from 123 participants. The findings highlight changing trends in banking behavior, preferences, and satisfaction levels, especially regarding cash-related services.

A significant portion of the respondents belong to the 20–30 age group, showing that young and tech-savvy users are the most engaged with banking services. The majority are students and private sector employees, indicating that the banking needs are more personal and income-related rather than business-oriented.

Public sector banks are still the most widely used, which shows continued trust in government-backed institutions. Most respondents operate savings accounts, further emphasizing personal use over business or investment banking.

When it comes to physical visits to banks for cash services, a large number of users visit monthly or rarely. This points to a clear shift toward digital banking and reduced dependence on branch-based services. ATM withdrawals remain the most frequently used cash service, although digital methods like UPI and wallets are now preferred for daily payments.

Overall satisfaction with cash handling is high, with most users stating they are satisfied or very satisfied. However, during peak periods like festivals, service consistency varies. Many respondents reported that banks “sometimes” manage well, suggesting room for better planning and responsiveness.

ATM cash availability is generally good, with most users finding them often or always stocked. Still, occasional shortages highlight the need for improved supply chain management in certain areas.

Delays in cash deposits or withdrawals are reported as rare or occasional, indicating generally acceptable service levels. Additionally, most users feel secure or somewhat secure about the bank's cash management systems, which shows strong customer trust.



The study also reveals that while digital payments are on the rise—especially UPI and wallets—there is cautious optimism toward a completely cashless system. A majority support or conditionally support this shift, provided reliable digital alternatives are in place.

In conclusion, the findings show a strong move toward digital banking, with continued reliance on cash for specific needs. Users appreciate the convenience and security of current systems but expect improvements during high-demand periods and in ATM servicing. The banking sector must focus on enhancing digital infrastructure while maintaining robust cash management services to meet the evolving needs of customers.

### CONCLUSION

The study highlights the evolving nature of cash management in the Indian banking sector, driven by technological advancements and changing customer preferences. It is evident that while traditional banking methods—especially cash services—still hold importance, there is a strong shift toward digital platforms, particularly among the younger population. Most respondents rely on savings accounts and public sector banks, showing continued trust in conventional banking institutions.

ATM withdrawals remain the most used cash service, but digital payment modes like UPI and wallets are increasingly becoming the preferred method for daily transactions. This reflects a broader national trend towards a less-cash economy. The overall satisfaction with cash handling and ATM availability is positive, although some inconsistencies remain during peak seasons and in specific areas.

Security perception among customers is largely strong, and support for a cashless banking system is growing, with users showing openness provided digital alternatives are reliable and secure. To meet customer expectations, banks must enhance their digital infrastructure while ensuring seamless and efficient cash services. The findings suggest that a balanced approach, integrating both physical and digital banking solutions, is essential for the Indian

banking sector to maintain customer trust and improve operational efficiency.

### ACKNOWLEDGMENT

I sincerely thank my guide, Dr. Shashank Sharma, for his valuable guidance and support. I also express gratitude to my family, friends, and participants who contributed to this study. Their encouragement and insights were vital in completing this research on cash management in the Indian banking sector.

### REFERENCES

- [1] RBI Reports and Publications on Cash Management and Digital Banking Trends in India.
- [2] Annual Reports of Public and Private Sector Banks (SBI, HDFC, ICICI, etc.).
- [3] Khan, M.Y., & Jain, P.K. (2018). *Financial Management*. Tata McGraw-Hill.
- [4] Vasant Desai (2016). *Banks and Institutional Management*. Himalaya Publishing House.
- [5] Research articles from journals like *The Indian Journal of Finance* and *International Journal of Banking and Finance*.
- [6] Data from NPCI on UPI and digital payments.
- [7] Government of India initiatives: Digital India, Jan Dhan Yojana, and financial inclusion schemes.