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### The Study of Cash Management in State Bank of India (SBI)

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Abstract: This study examines the cash management system at the State Bank of India (SBI), focusing on how the bank manages its cash flow, liquidity, and day-to-day cash operations across its extensive network. The research looks at the methods SBI uses to optimize cash availability, minimize costs, and improve efficiency in its branch operations. It also explores the role of technology in enhancing cash management processes and meeting the needs of customers while ensuring compliance with regulatory standards. Additionally, the study identifies the challenges faced by SBI in maintaining effective cash management, such as handling fluctuations in demand and managing risk. Ultimately, the study aims to offer insights into best practices and suggest potential improvements for bank's cash management strategies.

### I. INTRODUCTION

The State Bank of India, as the largest public sector bank in India, faces unique challenges in cash management. With a vast network of branches, ATMs, and digital channels, SBI must manage a significant volume of cash transactions daily, ranging from routine withdrawals and deposits to more complex financial operations like cash forecasting and liquidity optimization. The bank's ability to efficiently manage its cash resources not only impacts its internal operations but also influences the overall stability of the Indian financial system.

It aims to provide an in-depth analysis of SBI's cash management practices, focusing on how the bank handles its cash inflows and outflows, manages liquidity, and ensures a smooth and efficient delivery of services to its diverse customer base. Specifically, it will examine the bank's strategies for cash forecasting, cash replenishment, cash transportation, and ATM management. The study also aims to identify key challenges faced by SBI in managing cash resources, such as regional variations in cash demand, regulatory constraints, and the increasing use of digital banking.

### II. OBJECTIVES

- 1) To analyze the current cash management system in SBI and its efficiency in handling liquidity and cash flow.
- 2) To identify the techniques and tools employed by SBI for cash flow forecasting, cash replenishment, and cash handling at branches and ATMs.
- 3) To evaluate SBI's strategies for cash reserve management, ensuring compliance with regulatory requirements like the Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR).
- 4) To evaluate how SBI's cash management practices impact customer satisfaction, particularly in terms of cash availability and transaction efficiency.
- 5) To propose recommendations for improving SBI's cash management system, focusing on cost effectiveness, and customer service.

### III. REVIEW OF LITERATURE

Overview and Importance: According to Narayan and Kapoor (2017), cash management is a significant function in banks, especially for large institutions like SBI. Efficient cash management ensures the bank maintains liquidity, meets the payment demands of its customers, and enhances profitability. Cash management functions include cash forecasting, optimization of cash reserves, and managing the flow of funds across various branches and ATMs.

Techniques in cash management: prakash(2019) elaborates on various techniques employed by Indian banks, including SBI, to streamline cash management processes. These include the use of technology for cash flow forecasting, real-time cash monitoring, and the establishment of cash vaults at key locations to reduce excess cash holding at branches.

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Banks are also employing predictive analytics to forecast cash demands and improve the accuracy of cash replenishment in branches and ATMs.

Branch-Level Cash Management: Srinivasan and Gupta(2018) discussed how SBI has evolved its cash management strategies at the branch level to cater to regional demand and minimize idle cash reserves. The authors mention that SBI uses automated teller machines (ATMs) and cash recycling machines to streamline cash flow management, reducing the need for human intervention and improving cash availability at branches.

Technological Integration: According to Sharma (2020), SBI has made significant strides in integrating technology into such cash management processes. Digital platforms such as mobile banking, internet banking, and the centralized banking system have improved cash flow management by providing real-time data and analytics. The centralization of cash management allows for more efficient allocation and movement of cash across branches, minimizing the risk of cash shortages.

ATM Cash Replenishment Strategy: Chawla and Suri (2018) highlight the importance of an efficient ATM replenishment strategy, which is critical for maintaining the liquidity of SBI's ATM network. They argue that the bank has adopted a data-driven approach to ATM cash management, relying on historical data, transaction volumes, and trends to predict the optimal cash levels in ATMs across various locations.

Optimization and Cost Control: A study by Joshi and Mehta (2021) explores how SBI optimizes cash replenishment to minimize both the cost of cash management and the risk of cash outs in its ATMs. Through automated systems, the bank has reduced manual intervention, increased operational efficiency, and lowered costs associated with cash transportation.

Managing Cash Shortages and Surpluses: Mehta and Patel (2021) explored strategies adopted by SBI to manage both cash shortages and surpluses. By employing cash management models such as just-in-time (JIT) cash flow and cash pooling, SBI has been able to balance its liquidity needs across branches and minimize excess idle cash.

Shift Towards Digital Transactions: According to Bansal (2020), the rapid adoption of digital payment systems (UPI, NEFT, IMPS) has reduced cash dependency in India, particularly in SBI, which has embraced digital payment solutions. As digital transactions increase, the need for physical cash handling has reduced, influencing the cash management strategies in banks.

Security and Fraud Risks: One of the key challenges faced by SBI in cash management is ensuring the security of its cash handling processes. According to Jha (2018), the threat of theft and fraud in both physical cash handling and ATM replenishment systems poses risks too the bank's operations. The study stresses the need for robust internal controls, regular audits, and the use of advanced security measures to safeguard cash flows.

### IV. RESEARCH METHODOLOGY

The research methodology for studying cash management in the State Bank of India(SBI) involves a systematic approach to gather, analyze, and interpret data related to the bank's cash management practices.

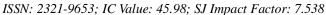
- 1) Primary Sources: These include the survey or questionnaire method, as well as the personal interview methods of data collection.
- Secondary Sources: These include books, the internet, company brochures, the company website, competitor's websites etc.

### V. DATA ANALYSIS AND INTREPRETATION

1) Q. On which bank you depend for your regular transaction

SBI	65%
ICICI	28%
HDFC	5%
OTHER	2%
Total No of people	100%

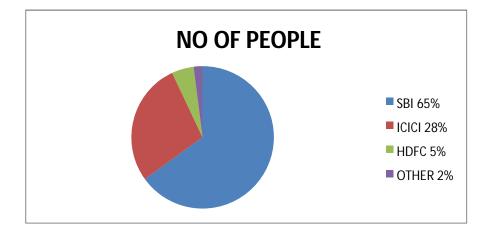






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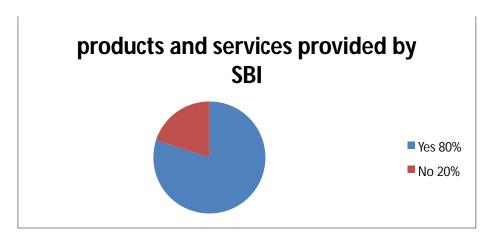


### Analysis of the above diagram:

It has been observed that approximately 65% correspondents are using the service of SBI for daily transactions, around 28% people are using ICICI bank for their transactions and only 5% & 2% are using HDFC & other bank services.

### Q. Are you aware of products and services provided by SBI?

YES	80%
NO	20%
Total No of people	100%



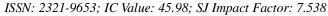
### Analysis of the above diagram:

From the above data it is clear that most of the customers (80%) have the idea about products and services of SBI, the rest (20%) have the idea about the product they are using.

### 3) Q. Are you aware of SBI's straight to bank services?

YES	55%
NO	45%
Total No of people	100%

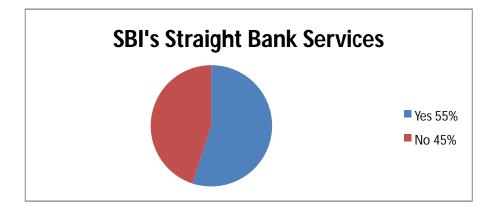






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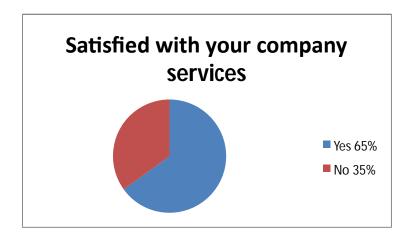


### Analysis of the above diagram:

The most of the companies (55%) are aware of cash management services provided by the bank. Remaining 45% does not know about bank services. The bank can look into companies as to propose its services to the concerned company personals.

### Q. Are you satisfied with your company services?

YES	65%
NO	35%
Total No of people	100%



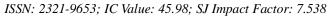
### Analysis of the diagram:

From the above analysis it can be interpreted that most of the companies were satisfied by there CMS provider but still they found few areas of improvement, SBI can give solutions for those areas.

### Q. What are your main modes of making payments?

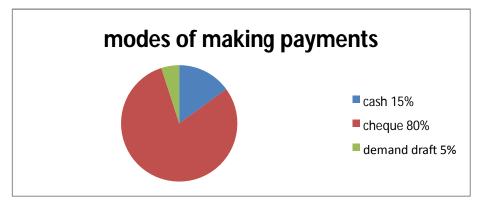
CASH	15%
CHEQUE	80%
DEMAND DRAFT	5%
Total No of people	100%







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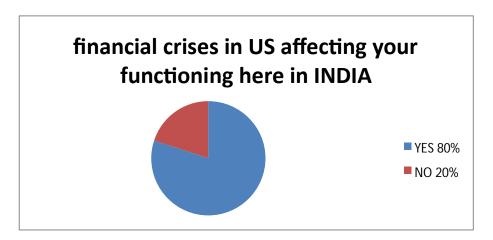


### Analysis of the above diagram:

Like premium most of the companies distribute their payments through cheques only DD and cash are made out under special circumstances.

### 6) Q. Does the financial crises in US affecting your functioning here in INDIA?

YES	75%
NO	25%
Total No of people	100%



### Analysis of the above diagram:

From the pie chart its quite evident that the financial crises in US are affecting people globally and even insurance companies are gravelly affected by the crisis.

### VI. FINDINGS

- 1) SBI focuses on maintaining a balance between cash inflows and outflows to ensure liquidity while minimizing idle cash. Predictive models and real-time monitoring are employed to optimize cash usage.
- 2) The bank operates a centralized treasury system that oversees the distribution and management of cash across branches and ATMs, ensuring adequate liquidity at all times.
- 3) SBI has integrated advanced cash management software and automated tools for real-time cash tracking, ATM replenishment, and cash forecasting. This helps enhance operational efficiency.

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- 4) ATM replenishment is automated and scheduled based on predictive analytics to ensure ATMs are stocked appropriately, reducing the risk of cash shortages.
- 5) SBI complies with Reserve Bank of India (RBI) guidelines on cash management, including maintaining cash reserves, following anti-money laundering protocols, and adhering to limits on cash withdrawals and deposits.
- 6) SBI is adapting to the digital transformation by promoting cashless transactions and exploring future technologies like block chain and central bank digital currencies (CBDCs) to further streamline cash management.

### VII. **SUGGEESTIONS**

- 1) Explore the methodologies used by SBI Bank to assess and forecast cash requirements across its branches to maintain optimal cash levels.
- 2) Investigate the integration of technology in cash management, such as automated cash dispensers, cash recyclers, and digital payment systems to streamline operations.
- 3) Examine the process of cash replenishment and the strategies employed by SBI to ensure sufficient cash availability during high-demand periods.
- 4) Analyze the internal control systems and security measures implemented to prevent cashrelated fraud, theft, or mismanagement in the bank.
- 5) Study SBI's methods of balancing cash supply and demand, including cash vault management and inter branch transfers, to ensure liquidity.
- 6) Research the impact of cash management on customer satisfaction, particularly in terms of ATM availability, accessibility of branches, and ease of cash transactions.
- 7) Investigate the training programs and skill development initiatives offered by SBI to employees involved in cash management activities.
- 8) Evaluate how SBI collaborates with other financial institutions and regulatory authorities to manage currency distribution and ensure smooth cash operations.

### VIII. **CONCLUSION**

In conclusion, the study of cash management in state bank of India (SBI) highlights the critical liquidity. The study reveals that SBI employs a mix of traditional and modern techniques, such as cash forecasting, liquidity management, and technological innovations like electronic fund transfers and automated cash handling systems, to optimize cash flow and reduce operational costs.

The implementation of robust cash management practices has allowed SBI to efficiently meet customer demands, minimize idle cash, and enhance operational efficiency. However, the study also indicates areas for improvement, such as further adoption of digital solutions, integration of AI for demand prediction, and enhancing the coordination between branches for cash distribution. Overall cash management is a pivotal aspect of SBI's overall financial stability, and continued advancements in technology and process optimization will ensure its capacity to handle future challenges in a dynamic banking environment.

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