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## Green Banking in India: A Study of Onsite and Offsite ATMs of Public Sector Banks

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### *Abstract*

*Public Sector Banks are major type of banks in India where a majority stake is held by the government. Public Sector Banks or Nationalized Banks dominated banking system in India.*

*There are various Green Banking Products (Paperless) i.e. ATMs, Credit Cards, Debit Cards, Online Banking (NEFT & RTGC) and Mobile Banking of Public Sector Banks in India. Under these green banking products, the banking transactions are done through an electronic device. All these products reduce the usage of paper which in turn saves trees.*

*This Research Paper emphasizes on the analysis of ATMs. An Automated Teller Machine (ATM) is an electronic telecommunications device that enables customers of financial institutions to perform financial transactions comfortably such as cash withdrawals, deposits, transfer funds, or*

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*obtaining account information at any time and without the need for direct interaction with bank staff. The study is focusing on ATM services provided by Public Sector Banks under Green Banking Sector. The present study focuses on growth of Onsite and Offsite ATMs of last five years with the objectives of Analyze ATM services by Public Sector Banks and Examine the Growth of Onsite and Offsite ATMs. The study is based on Secondary Data. The period of the study for analyzing the growth of Onsite and Offsite ATMs is from 2019-20 to 2023-24.*

**Keywords:** *ATMs, Onsite and Offsite, Growth, Green Bank.*

## **Introduction**

The Indian Banking Industry can be classified into Public Sector Banks, Private Sector Banks and Specialized Banking Institutions. Public Sector Banks are major type of banks in India where a majority stake is held by the government. Public Sector Banks or Nationalized Banks dominated banking system in India.

There are various Green Banking Products (Paperless) i.e. ATMs, Credit Cards, Debit Cards, Online Banking (NEFT & RTGC) and Mobile Banking of Public Sector Banks in India. Under these green banking products, the banking transactions are done through an electronic device. All these products reduce the usage of paper which in turn saves trees.

This Research Paper emphasizes on the analysis of ATMs. An Automated Teller Machine (ATM) is an electronic

telecommunications device that enables customers of financial institutions to perform financial transactions comfortably such as cash withdrawals, deposits, transfer funds, or obtaining account information at any time and without the need for direct interaction with bank staff.

Initially, ATM machines were used as cash dispensers through which customers could only withdraw cash and receive their bank account details.

On most modern ATMs, customers are identified by inserting a plastic ATM card or some other acceptable payment card into the ATM, with authentication being by the customer entering a personal identification Number (PIN), which must match the PIN stored in the chip on the card, if the card is so equipped, or in the issuing financial institution's database. The first ATM was developed in the year 1965 and was introduced by BarclaysBank, London.

## **Scope of the Study**

The study is focusing on ATM services provided by Public Sector Banks under Green Banking Sector.

## **Review of Literature**

- Yogesh Kumarwat and Manish Dubey (2017) in their paper define concept of Li-Fi on ATM transaction. This technique a concept of LED and visible light is used for data transmission and during ATM transaction used an encrypted LiFi transfer pin, which is providing security

for data transmission.

- Ram Raj G (2018) examines the various types of Automated Teller Machines in India. He also examines the growth and usage of ATMs in Indian Banking sector. This study declares that there is an immense growth in Indian ATM service and positively increasing a number of public using ATM every day.
- S. Geetha and Dhivya Bharathi (2019) concluded in their paper that the human relation only the way to improve the better service quality into quality of service.
- Ravindra Devidas Kene and Mulkalwar (2023) observed that the number of crime related to ATM increased hence needs to provide better security to ATM machine. They also study various security methods available for banking and ATMs so as to understand the security issues and next research opportunities.
- Gitanjali Mehta (2024) paper contains the ATM safety protocol based around and improved using biometric authentication strategy, such as face recognition. Forestalling unapproved access in one of the simple thinking processes of biometrics, meaning that anyone cannot access the ATM implies that the customer should present to access the ATM.

## Research Gap

Review of Literature reveals that various studies have been made on ATMS over a period of time focusing on Li-Fi concepts on ATM transactions, growth and usage of ATMs, quality services of ATMs, crime related to ATMs and ATM safety protocol etc. However, they have not addressed the

growth of Onsite and Offsite ATMs of Public Sector Banks in India. The present study focuses on growth of Onsite and Offsite ATMs of last five years.

## **Objectives of the Study**

- To Analyze ATM services by Public Sector Banks
- To Examine the Growth of Onsite and Offsite ATMs

## **Research Methodology**

- **Source of Data:** The study is based on Secondary Data. The secondary data pertaining to Onsite and Offsite ATMs and ATMs services by Public Sector Banks is collected from the RBI Reports, All other Public Sector Bank Annual Reports. Secondary Sources includes National and International Journals, Magazines and Published Books.
- **Period of the Study:** The period of the study for analyzing the growth of Onsite and Offsite ATMs is from 2019-20 to 2023-24.
- **Tools for Analysis:** The data on the ATMs of Public Sector Banks collected from different sources have been analyzed by using well established statistical tools and techniques. The following tool is used for analysis:

## Compound Annual Growth Rate (CAGR)

It works out change for a given period on the basis of the base year and the end year value i.e.

$$g = \left( \frac{K_i}{K_o} - 1 \right) \times 100$$

Where  $K_i$  and  $K_o$  represents the values of variables at the end and basic year respectively.

## Analysis of ATM Services by Public Sector Banks

Based on location, ATMs are divided into 2 types. They are:

- On-Site ATMs
- Off- Site ATMs

**1. On-Site ATMs:** If ATMs are made available by the banks in the bank premises so that both the physical branch and the ATM can be used by people for several purposes like to avoid the lines or queues and save time required to complete their transactions. it is On-site ATMs.

**2. Off- Site ATMs:** If ATMs are made available by banks at convenient locations of public places like bus stations, railway stations, air ports, supermarkets, petrol bunkers, etc. Depending upon the volume of business, banks install required number of ATMs for their customers at convenient places. This is to facilitate the people to use the bank services even when there is no bank branch in the area.

**Table 1:** Innovations or a Paradigm Shift in ATMs Usage

Year	Usage
1988-1994	<ul style="list-style-type: none"> <li>• Deposit of cash</li> <li>• Withdrawal of Cash</li> </ul>
1995-1999	<ul style="list-style-type: none"> <li>• Mini statement</li> <li>• Balance Inquiry</li> </ul>
2000-2001	<ul style="list-style-type: none"> <li>• Coupon Dispensing</li> </ul>
2001-2004	<ul style="list-style-type: none"> <li>• Coupon Dispensing</li> <li>• Fulfilling request from customers</li> <li>• Account transfer</li> <li>• Touch screen menus</li> </ul>
2004-2006	<ul style="list-style-type: none"> <li>• Bill payment</li> <li>• Mobile recharging</li> </ul>
2007 onwards	<ul style="list-style-type: none"> <li>• EMV chips</li> <li>• Check deposit facility with scanning</li> <li>• Customised ATMs</li> <li>• Solar –powered ATMs</li> <li>• White label ATMs</li> <li>• Biometric ATMs</li> <li>• Cash recyclers</li> </ul>

**Source:** *Compiled from [www.ibef.org](http://www.ibef.org), September 2016*

**ATMs Onsite:** The following table shows the Cumulative values of number of On-Site ATMs of the Public Sector Banks as on 31<sup>st</sup> March for the years 2019-20 to 2023-24.

**Table 2:** ATMs Onsite as on 31<sup>st</sup> March

<b>Year</b>	<b>Number Added</b>	<b>Number of ATMs</b>
2019 – 2020	-	80,691
2020 – 2021	(2684)	78,007
2021 – 2022	(2354)	75,653
2022 - 2023	3124	78,777
2023 - 2024	(1744)	77,033
<b>Total</b>		<b>3,90,161</b>
<b>CAGR</b>		<b>-0.92%</b>

**Source:** *Compiled from [www.rbi.org.in](http://www.rbi.org.in)*

Table 2 gives a clear picture of the growth in the number of ATMs installed onsite by Public Sector Banks during 2019-20 to 2023-24. In the year 2019-20 the total number of Onsite ATMs installed by the banks were 80,691 and it gradually decreases year by year and reached to 77,033 in the year 2023-24. The growth rate in terms of number of Onsite ATMs is -0.92%. The reasons for the tremendous decrease in the number of Onsite ATMs are that more transactions are done online by direct/standing order. This means there is less demand for ATMs.

**ATMs Offsite:** Another Green Banking (paperless) product offered by banks is Offsite ATMs. The following Table shows the cumulative values of number of Off site ATMs of the Public Sector Banks as on 31<sup>st</sup> March for the years 2019-20 to 2023-24.



**Table 3: ATMs Offsite as on 31<sup>st</sup> March**

<b>Year</b>	<b>Number Added</b>	<b>Offsite</b>
2019 – 2020	--	57,855
2020 – 2021	(1251)	59,106
2021 – 2022	698	59,804
2022 - 2023	(158)	59,646
2023 - 2024	(1985)	57, 661
<b>Total</b>		<b>2,36,411</b>
<b>CAGR</b>		<b>-0.07%</b>

**Source:** compiled from [www.rbi.org.in](http://www.rbi.org.in)

It is clear from the above table that the number of ATMs installed offsite by Public Sector Banks during 2019-20 to 2023-24. In the year 2019-20 the total number of Offsite ATMs installed by the banks were 57,855 and it gradually decreased year by year. The number of ATMs reached to 57, 661 till March 2024. The growth rate in terms of number of off-site ATMs is -0.07%. The reasons for the decrease of ATMs due to rising costs in its installation, operation and maintenance, rationalization of branches as a cost cutting measures and, in these years, many public banks got merged for reducing branch operational cost.

## Conclusion

This paper discusses the changing landscape of ATM usage in India, with two key points:

- The RBI mandates banks to offer a minimum number of free ATM transactions for savings accounts. This is

especially important in metro cities where the limit is at least 3 transactions for using ATMs of the banks exceeding this limit can incur fees.

- The cap on free cash transactions and interoperability may have discouraged banks from expanding their ATM networks.
- The increasing popularity of UPI for digital transactions might be leading banks to focus on less ATMs due to lower cost and convenience.

However, a segment of population still relies heavily on cash and may not have adopted UPI yet. This suggests, ATMs remain relevant for a portion of the population.

This paper concludes that a potential slowdown in ATM growth due to changing regulations and user behavior, but acknowledges the continued need for cash access for some.

## References

- [1] Yogesh Kumawat and Manish Dubey (2017), “A Review Paper on ATM Transaction”, International Journal of Advance Research in Computer Science and Management Studies, Vol. 5, Issue 4, ISSN: 2321-7782.
- [2] Ram Raj G (2018) “Growth and Development of ATM in India”, Asian Journal of Research in Banking and Finance, DOI:10.5958/2249-7323.2018.00007.X
- [3] S. Geetha and K. Dhivya Bharathi (2019), “Automated Teller Machine: Usage and Issues – A conceptual Study”, IJRAR, Vol. 6, Issue 2, ISSN-2349-5138.
- [4] Ravindra Devidas Kene and Mulkalwar (2023), “Bank and ATM Security: An Overview”, Conference: International conference on Academic Research and Innovation in Teaching and Arising Inclination in Professional Education.
- [5] Gitanjali Mehta (2024), “ A Review Paper on ATM Security”, Journal of Emerging Technologies and Innovative Research”, Vol. 11, Issue 7, ISSN: 2349-5162.
- [6] [www.rbi.org.in](http://www.rbi.org.in)
- [7] [www.ibef.org](http://www.ibef.org)