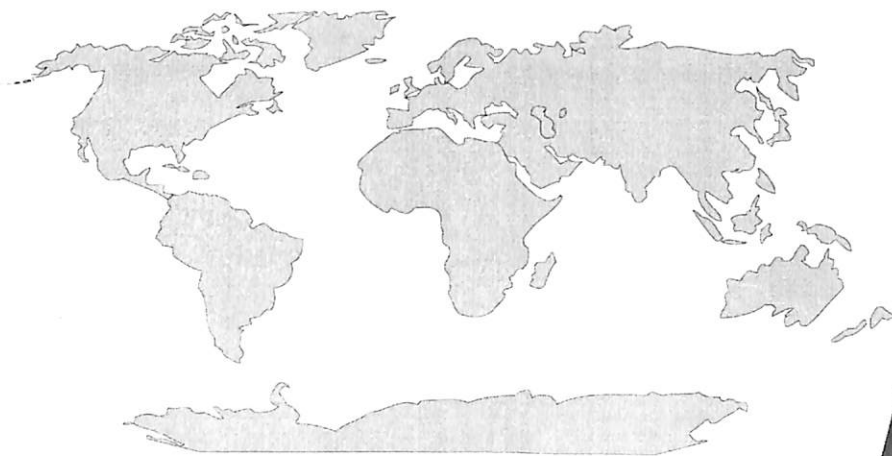


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**A STUDY OF E-BANKING SERVICES PROVIDED BY NATIONALIZED AND PRIVATE BANKS
WITH REFERENCE TO AHMEDNAGAR DISTRICT**

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ABSTRACT

Banks in India need to be complimented on the inclusion of information technology at a large way in day-to-day operations. Credit must be given to all the Indian banks who have brought the new wave of techno banking in our nation. In very short span customers of banks have felt the positive impact of technological solutions implemented by banks. Today banks are focusing on E-banking services which are very effective for the customer to use. Despite the fact that in the Indian Banking Industry nationalized banks have huge network, infrastructure and customer base, still its performance is low for e-banking services as compared to its counterpart in the private sector. This study brings out the existing picture of e-banking services provided by both nationalized and private sector banks in Ahmednagar district and its role in the banking sector.

Keyword: Assurance, E-banking, Information Technology, Reliability & responsibility Security

I. INTRODUCTION

The landscape of India's financial sector is changing as anywhere, anytime-banking, using different channels and technology, will bring a multi-fold increase the reach of technology to rural and remote areas. E-banking is the need of the hour. E-banking in India has to confront a lot of challenges¹. The government is introducing regulatory measures from time to time to ensure reliability and security, but introduction of technology is not enough. Finland was the first country in the world to have taken a lead in E-banking. In India, it was an ICICI bank, which initiated to introduce E-banking as early as 1997 under the brand name Infinity².

Revolution in the information technology has made the Indian economy steady inroads into the banking institutions and has brought about a significant change in many aspects in the form of computerization of transactions and new delivery channels such as Internet banking, Mobile-banking, Telephone-banking, Automated Teller Machine (ATM), Debit cards, Credit Cards, Electronic Transfer Fund (ETF), Electronic Clearing services (ECS), etc. Apart from a several leading private players, SBI and Central Bank of India are the major public players in the banking sector. The brief introduction of the banking industry, sector overview and e-banking services is given as below:

a) Banking Industry:

Today banking is the booming industry in India, as it focuses on technological innovation. Internet banking has emerged as the biggest focus area in the "Digital Transformation" agenda of banks. In 2012-13, Indian banks deployed technology-intensive solutions to increase revenue, enhance customer experience and optimize cost structure³. However, there is a broad change in the technology agendas and implementation capability across different players of the banking sector:

- Improving core-banking value
- Dealing with a varying risk regime
- From cash to electronic modes of payment
- Dealing with financial inclusion

The technological evolution of the Indian banking sector has been largely directed by the several committees set up by the RBI and the government of India to review the implementation of technological change. Indian banking has succeeded in many aspects of its business to gain improvement, but still information technology is the biggest challenge to adopt it in totality.

II. OBJECTIVES OF THE RESEARCH STUDY

- a) To study the e-Banking services provided by nationalized and private Sector banks in Ahmednagar district.
- b) To study the satisfaction level of e-banking service users for e-banking services provided by nationalized and private Sector banks in Ahmednagar district.

III. HYPOTHESIS

For the purpose of the study following Hypothesis is formed and tested.

H₀: Satisfaction level of e banking users for Services quality of e banking, Reliability & Responsiveness, Assurance and Security is good of all banks.

H₁: Satisfaction level of e banking users for Services quality of e banking, Reliability & Responsiveness, Assurance and Security is not good of all banks.

$$H_0 < 0.50 \quad \text{and} \quad H_1 > 0.50$$

IV. E-BANKING SERVICES AT GLANCE

E-banking also offers the convenience of round-the-clock online banking and many customer service options. E-banking can be defined as the effective delivery and automation of new conventional banking products and services for customers through electronic, interactive communication channels "It encompasses the wide technological innovations that have taken place in banking from transferring funds online, making online payments for almost all the service, managing account balances to making a railway, airway and hotel bookings. It has removed the barriers of 'Brick and mortar' model of banking."⁴

"Electronic banking is the acme of information technology usage, to omit time and place limitation"⁵. E-banking services at a glance given below.

1. **Core-banking:** Core-banking is a general term used to describe services provided by a group of networked bank branches.
2. **Automated Teller Machine:** An Automated Teller Machine (ATM), is also known as Cash Machine or Automated Banking Machine (ABM). ATM can be defined as a machine that allows customers of a banking institution to transact banking business without any help of a bank cashier, clerk or any bank employee.
3. **Debit card:** A debit card is very similar to a cash card/ATM card, but it allows you to do a lot more than use an ATM machine. A debit card is like an electronic cheque that you can use to pay for goods and services⁶.
4. **Electronic Fund Transfer (EFT):** EFT offers facilities to make payments to account holders of other banks in an efficient and fast manner. As against the physical clearing, where the cheques are cleared on presenting of the physical instrument at the clearing house, in system EFT the transactions are settled electronically⁷.
5. **Credit Card:** A credit card is a card issued by a bank or financial institution giving the holder an option to borrow funds, usually at the point of sale. Credit cards charge interest and are primarily used for short-term financing.
6. **Mobile-banking:** In mobile-banking bank customers do banking transactions and make enquiries while traveling using mobile phones. The customer can use the mobile-banking services like 'request facility' and 'alert facility' for any transaction and enquiry.⁸
7. **Real Time Gross Settlement (RTGS):**– It provides for an electronic based settlement of inter Bank & Customer based transactions, with intraday collateralized liquidity support from RBI to the participants of the system.

V. SCOPE AND LIMITATION OF THE STUDY

- a. **Area:** The scope of the research is limited to four taluka's of Ahmednagar District. Ahmednagar district is located in the Maharashtra state, India.
- b. **Nature of Banks:** The study is confined to Nationalized and private sector banks within the four taluka's of Ahmednagar district.
- c. **Time Period:** The time period of the study is limited to the year 2016 to 2017.

LIMITATIONS OF THE STUDY

- a) The study is concerned only with some of selected nationalized banks, and private sector banks in Ahmednagar district. The other banks are not covered.
- b) Financial Performance of the banks is also not studied.

VI. RESEARCH METHODOLOGY

E-banking service users of nationalized and private banks in Ahmednagar district constitute the universe.

a) Sources of Data

Primary data is collected with the help of structured questionnaires from 430 e-banking service users. Secondary data is collected from Reference books, Research Journals & Research Articles, PhD Thesis, Internet, Newspapers, and Annual Report of banks

b) Sampling Design

• Selection of Banks

Three nationalized and three private sector banks selected for research purpose in Ahmednagar district namely State Bank of India, Central Bank of India, Bank of Maharashtra, ICICI Bank, HDFC Bank and Axis Bank

• Selection of Taluka

There are 14 talukas in Ahmednagar district. From which selected taluka's are from North Division Rahuri & Shrirampur and from South Division Ahmednagar & Shrigonda.

• Population/Universe of Banks

The population/ universe is defined as total 78 Nationalized and private sector banks in selected taluka's of Ahmednagar district.

• Sample size of E-banking Users

The size of the sample is decided using statistical method. In this research paper, the sample size (n) is 430

DATA ANALYSIS & FINDINGS

Statistical tools are used for data analysis. The computer software 'SPSS' is used for data analysis. As the z- test for proportion is used for data analysis.

Table 1: Z test for Agreements towards satisfaction level for the Service Quality of E-banking services provided by your bank

Sr. No.	Sub Sr. No.	Statements	Hypo.	Z Value	Table Value	Discussion
a)	Agreements towards satisfaction level for the Service Quality of E-banking services provided by your bank					
	1	Simple and easy procedure for registration of e-banking services	$H_0 < 0.50$ $H_1 > 0.50^*$	12.12	1.96	Fail to accept H_3
	2	Easy to operate ATM banking services	$H_0 < 0.50$ $H_1 > 0.50^*$	6.55	1.96	Fail to accept H_3
	3	Easy to operate mobile-banking services	$H_0 < 0.50^*$ $H_1 > 0.50$	-9.54	1.96	Accept H_3
	4	Easy to operate Internet banking services	$H_0 < 0.50^*$ $H_1 > 0.50$	-3.95	1.96	Accept H_3
	5	Convenient location and availability of ATMs	$H_0 < 0.50^*$ $H_1 > 0.50$	-6.55	1.96	Accept H_3
	6	I did not find any mismatch of balance problems till now while using e-services	$H_0 < 0.50^*$ $H_1 > 0.50$	-6.55	1.96	Accept H_3

Table 2: Z test for Agreements towards satisfaction level for the reliability & Responsiveness

Sr. No.	Sub Sr. No.	Statements	Hypo.	Z Value	Table Value	Discussion
b)	Agreements towards satisfaction level for the Reliability & Responsiveness					
	7	E-banking services are as per specifications brochure	$H_0 < 0.50$ $H_1 > 0.50^*$	20.73	1.96	Fail to accept H_3
	8	Good support for customer's service problems queries	$H_0 < 0.50$ $H_1 > 0.50^*$	7.04	1.96	Fail to accept H_3
	9	Use of ATM cards with multiple bank ATMs	$H_0 < 0.50$ $H_1 > 0.50^*$	2.60	1.96	Fail to accept H_3
	10	Bank alerts before after updation in account balances	$H_0 < 0.50$ $H_1 > 0.50^*$	20.73	1.96	Fail to accept H_3
	11	Provides information regarding new scheme of Bank	$H_0 < 0.50$ $H_1 > 0.50^*$	20.73	1.96	Fail to accept H_3

Table 1: Z test for Agreements towards satisfaction level for the Assurance

Sr. No.	Sub Sr. No.	Statements	Hypo.	Z Value	Table Value	Discussion
c Agreements towards satisfaction level for the Assurance						
	12	Availability of information of bank on Internet	$H_0 < 0.50^*$ $H_1 > 0.50$	-11.09	1.96	Accept H_0
	13	24:7 Hours e-banking services are available (ATM, Internet, Mobile)	$H_0 < 0.50^*$ $H_1 > 0.50$	-6.55	1.96	Accept H_0
	14	Good account security maintained by the bank	$H_0 < 0.50$ $H_1 > 0.50^*$	3.34	1.96	Fail to accept H_0
	15	Satisfactorily solves problems of Users	$H_0 < 0.50$ $H_1 > 0.50^*$	20.73	1.96	Fail to accept H_0

Table 2: Z test for Agreements towards satisfaction level for the Security

Sr. No.	Sub Sr. No.	Statements	Hypo.	Z Value	Table Value	Discussion
d Agreements towards satisfaction level for the Security						
	17	Proper security is provided of your account	$H_0 < 0.50^*$ $H_1 > 0.50$	-6.55	1.96	Accept H_0
	18	Personal Identification Number (PIN) system is suitable for security	$H_0 < 0.50$ $H_1 > 0.50^*$	20.73	1.96	Fail to accept H_0
	19	The bank keeps account information Confidential	$H_0 < 0.50$ $H_1 > 0.50^*$	20.73	1.96	Fail to accept H_0
	20	Better security regarding unauthorized access(Hackers)	$H_0 < 0.50$ $H_1 > 0.50^*$	2.60	1.96	Fail to accept H_0
	21	Provides physical (watchman, camera, etc.) security to ATM centers	$H_0 < 0.50$ $H_1 > 0.50^*$	2.60	1.96	Fail to accept H_0

VII. FINDINGS RELATED TO HYPOTHESIS TESTING

Z Test of proportion :Hypothesis 1st

Satisfaction level of e-banking users for Services quality of e-banking, Reliability & Responsiveness, Assurance and Security is good of all banks.

$$H_0 < 0.50 \quad \text{and} \quad H_1 > 0.50$$

In order to study the specific opinion of e-banking users towards above e bank related statement Z test of Proportion is used. Following various statements were formulated for testing the result. The Result of Z Test is as follows:

- Agreements towards satisfaction level for the Service Quality of E-banking services provided by your bank
- Simple and easy procedure for registration of e-banking services for this statement the Z Value (12.12) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short the procedure for registration of e-banking services is simple & easy.
- Easy to operate ATM banking services for this statement the Z Value (6.55) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short the ATM Banking service is easy to operate.
- Easy to operate mobile-banking services for this statement the Z Value (-9.54) which is less than the table value (1.96) so researcher accept Null Hypothesis (H_0), it means less than 50% respondents are agree with this statement in short the Mobile-banking system is not easy to operate.

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- Easy to operate Internet banking services for this statement the Z Value (-3.95) which is less than the table value (1.96) so researcher accept Null Hypothesis (H_0), it means less than 50% respondents are agree with this statement in short the Internet Banking system is not easy to operate.
 - Convenient location and availability of ATMs for this statement the Z Value (-6.55) which is less than the table value (1.96) so researcher accept Null Hypothesis (H_0), it means less than 50% respondents are agree with this statement in short ATMs are not available at convenient locations.
 - I did not find any mismatch of balances/problems till now while using e-services for this statement the Z Value (-6.55) which is less than the table value (1.96) so researcher accept Null Hypothesis (H_0), it means less than 50% respondents are agree with this statement in short the above statement is not true.
 - **Agreement toward satisfaction level for Reliability & Responsiveness**
 - E-banking services are as per specifications/ brochure for this statement the Z Value (20.73) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short the E-banking services are as per specifications/ broacher.
 - Good support for customer problems, queries for this statement the Z Value (7.04) which is greater than the table value (1.96) so researcher fail to reject Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short banks are providing Good support for customer's service problems queries.
 - The use of ATM cards with multiple bank ATMs for this statement the Z Value (2.60) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short the above statement is true.
 - Bank alerts before/after updation in account balances for this statement the Z Value (20.73) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short the above statement is true.
 - Provides information regarding the new scheme of Bank for this statement the Z Value (20.73) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short banks are provides information regarding the new scheme of the Bank.
 - **Agreements towards satisfaction level for Assurance**
 - Availability of information of bank on the Internet for this statement the Z Value (-11.09) which is less than the table value (1.96) so researcher accept Null Hypothesis (H_0), it means less than 50% respondents are agree with this statement in short the above statement is not true, because more than 50% respondents are not aware about internet banking.
 - 24/7 Hours e-banking services are available (ATM, Internet, Mobile) for this statement the Z Value (-6.09) which is less than the table value (1.96) so researcher accept Null Hypothesis (H_0), it means less than 50% respondents are agree with this statement in short the above statement is not true, because more than 50% respondents are not aware about Mobile / e-banking.
 - Good account security maintained by the bank for this statement the Z Value (3.34) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short banks are maintained good account security.
 - Satisfactorily solves problems of Users for this statement the Z Value (20.73) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short banks solves problems of Users .
 - **Agreement towards satisfaction level for Security**
 - Proper security is provided to your account for this statement the Z Value (-6.96) which is less than the table value (1.96) so researcher accept Null Hypothesis (H_0), it means less than 50% respondents are agree with this statement in short the above statement is not true.
 - Personal Identification Number (PIN) system is suitable for this statement the Z Value (20.73) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short Personal Identification Number (PIN) system is suitable for account security.
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- The bank keeps account information Confidential for this statement the Z Value (20.73) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short the statement is true.
- Better security regarding unauthorized access(Hackers) for this statement the Z Value (2.60) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short banks provides better security regarding unauthorized access(Hackers).
- Provides physical (watchman, camera etc.) security to ATM centers for this statement the Z Value (2.60) which is greater than the table value (1.96) so researcher fail to reject the Null Hypothesis (H_0), it means more than 50% respondents are agree with this statement in short the above statement is true.

VIII. CONCLUSION

Electronic banking has changed the outlook of banking industry worldwide as it has provided immense opportunities to banks with various e-banking services. Results of the study reveals that though the nationalized banks are having a huge customer base, infrastructure and network still the private banks are better in providing e-banking services. From the study it can be concluded that performance of Private sector banks in terms of service quality, transparency and level of satisfaction is better than the nationalized banks.

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