

BANKING SERVICE EXCELLENCE DUE TO TECHNOLOGICAL INNOVATIONS IN BANKING

– A Study of ALM through CAMELS approach

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Abstract : Digitalisation has been taken place in banking sector, since 1995, and it took speed since 2000, again further acceleration happens since 2005, and stretched its wings and started flying since 2016. Yes, the year 1995 was instrumental for computerization popularity in banks, followed by RBI approval happened in 2000 for digitalization of bank documents. Year 2005 brought internet ATMs and further dimension of new technological innovations arrived. Demonetisation happened on November 8, 2016 created tremendous impact among all the banks to go for cashless banking. The customers were almost forced to go for cashless banking transactions. Now technological innovations go at greater speed in India. Cashless transactions become a hand burning need of the hour. Therefore, so far ignored Paytm, bank apps, NEFT transfers and such things started gaining popularity. Techno dynamism is part and parcel of our life. Not only in banks, but also in all the sectors in India, digitalization started its virtual presence and the name of "Digital India" has been popularized since 2015. Production and Marketing are the two eyes of a business venture. Such two eyes would see one object, namely, Business development. In Banking also, production and marketing of digital services are important. Production of banking services means offering bank schemes and services of bankers to the customers. Marketing of banking services means promotional services offered by bankers. In this research article, both production of digital banking services and digital marketing of banking services are dealt with. A survey from bank customers was conducted among 450 customers of 15 banks selected from Chennai, by following Multi Stage Quota Sampling method. The customers who have been using Digital banking services were contacted for this research. Prosperities, Major Hurdles, Common constraints, Improvement possibilities on Digital banking and digital marketing of banking services are all discussed elaborately in this research article. Individualised attention on customers by bankers, bank account safety, long term welfare of the customers, Information system security, Forensic accounting and auditing practices all the needs of the hour, due to the technological advancements in banking sector.

IndexTerms- Digitalisation, Cashless banking, Digital marketing of bank services, Digital banking, SMS banking, RTGS, NEFT, ATM, ALM, CAMELS

I. INTRODUCTION

Digital India has been more popular since 2016 and due to the advent of technological innovations, banking industry has been shining very well. Prosperities have been inviting red carpet treatment to the customers. Challenges have been also attacking behind the banking industry. Both pros and cons have been moving parallelly hand in hand. Since this is transformation stage, hurdles are quite common. But, such hurdles have to be solved and improved suitably. Traditional cash banking has been transformed into Digital Banking. Therefore, traditional individualized approach to customers has been transformed into massive customization. Therefore, personal touch is missing with the customers. This results in a new dimension namely "Personalization in banking", by ways of SMS banking (Quick codes transmission), Mobile banking, Video Banking, Interactive Teller Machine (ITM) instead of ATM and so on. Agility of banking services take place because of technological advancements in banking industry. This article deals with banking service excellence due to technological advancements in banking industry. This research article focuses on Banking services among the banks and utility of such services by customers in Chennai.

1.1 TECHNO DYNAMISM IN BANKS:

Gone are the days when we went to the banks in person for doing banking transactions, stood in the queues with yellow bags or hand bags, awaited for our turns, did banking transactions manually. But now a days, we do banking at our palms by using smart phones, at our laps by using laptops. Queue banking became queueless banking. Paper documentation became paperless documentation. Banking Regulations Act, Indian Contract Act, Indian Evidences Act, Indian Companies Act, Negotiable Instruments Act and such Acts were amended suitably to accept electronic documents and digitalization of banking services. Cash dealings became less cash transactions and moving towards cashless transactions. Virtual banking takes another dimension called Video banking. Due to Digitalisation of banks, personlisation is missing. Therefore, Robots are introduced in banking sector. City Union Bank has introduced a 2 feet robot, namely Lakshmi in Kumbakonam, followed by several branches, now a humanoid Lakshmi Robot is there in T.Nagar, Chennai and it attracts several customers. Robot banking becomes more popular, even at its infancy stage itself.

1.2 A Study of ALM through “CAMELS” approach :**Service Quality as an extended “S”, becoming CAMELSS :**

ALM refers to Asset Liability Management. For bankers, major current assets are loans and advances lent to the borrowers. Such assets (Loans lent by bankers) would be bifurcated as Performing assets, Non performing assets. Non performing assets may be trifurcated as Sub standard assets, Doubtful assets and Loss assets. Regarding liabilities, deposits from public are the major liabilities for the bankers. Bankers earn money from interest on loans lent and by giving interest to deposit holders. Managing deposits and loans are vital part in banking administration. For an efficient Asset Liability Management, service quality of banks plays a significant role in mobilizing deposits from public and lending loans to the needy borrowers. Customers are the goose laying golden eggs for bankers. In order to study Asset Liability Management, CAMELS approach is applied. C for Capital adequacy, A for Asset Management, M for Management efficiency, E for Earnings Management, L for Liquidity Management, S for Sensitivity analysis and risk management. Another “S” is emerged for denoting Service Quality. This Service Quality Excellence due to technological advancements in banking is presented in this research article.

II RECENT TECHNOLOGICAL ADVANCEMENTS:

1. Mobile banking
 - a. SMS Banking
 - i. SMS Banking for checking balance enquiry
 - ii. SMS Banking by using quick codes
 - b. Call Banking
 - i. Missed Call for checking balance
 - ii. Missed Call for customer satisfactory survey
 - iii. Calling banker and doing banking transactions
 - c. Banking transactions by using Smart phones
 - i. Usage of Apps for doing banking transactions
 - ii. Usage of banking websites for doing banking transactions
 - d. Video Banking
 - i. Video Conferencing with bankers and doing banking transactions, by using smart phones
 - ii. Video Conferencing with bankers by using laptops and computers
 - iii. Video Conferencing with ATM machines and doing banking transactions, which is named as Interactive Teller Machines (ITMs)
 - e. Petty payments – Paytm, Mobikwik, SBI Pay and so on
 - f. Banking with Jio money or Airtel money
 - g. Smart watches in banking (Extended smart phones in watches form)
2. Online banking transactions with the help of bankers
 - a. RTGS
 - b. NEFT and
 - c. CTS through banks
3. Point of Sale – Card swiping machines (Debit card and Credit card swiping)
4. Digital Marketing campaigns
 - a. Contacting potential customers by Whatsapp messages
 - b. Contacting them by SMS
 - c. Contacting them by Social networking websites like instagram, twitter, face book
 - d. Contacting them by Emails
5. Big Data Analytics and Artificial Intelligence
6. Customer Relationship Management and Retention in Digital era
 - a. Automated SMS when birth days of customers come
 - b. Automated SMS when common festivals like Deepavali, Christmas come
 - c. Automated SMS when family festival anniversaries like wedding anniversary come
 - d. Automated SMS when banking festivals like Customers day celebration, Deposit mela, Vehicle Loan Mela, Home loan Mela come
 - e. Special SMS whenever we make any special banking schemes
 - f. Calling Customers and talking by computerized voice mechanism whenever needed
7. Green Banking (Usage of electronic and electric substances for digitalization which are not harmful to the society and environment)
8. Robot Banking and Artificial Intelligence (Usage of Robots for assisting bankers and bank customers for doing banking transactions)
9. Internet of things and Cloud computing in banking sector
10. Development of Financial Inclusion, Personalisation, Mass Customisation and Agility in banking service

2.1 EMERGING TECHNOLOGICAL ADVANCEMENTS IN NEAR FUTURE:

1. Mobile Banking and Digital banking advancements
2. Block chain technology
3. Smart watches
4. Google glasses
5. Upgraded ATMs, ATMs in the name of ITMs (Interactive Teller Machines) for doing multiple banking functions
6. Automated Financial services
7. Strategic partnerships
8. Extended Application Interfaces
9. Artificial Intelligence in Apps and Online banking transactions
10. Extended Security measures by using biometrics and video mechanisms and ensuring higher level security mechanisms
11. Video banking and Extended virtual reality
12. Robot banking
13. Application of Internet of things in retail banking
14. Focus on Retail banking and personalization of banking services
15. Cloud computing technologies and Sky banking

2.2 FOCUS OF TECHNOLOGICAL INNOVATIONS IN THIS RESEARCH ARTICLE:

Even though several technological innovations have been taking place for the past several years, due to time constraint, the Researcher focuses her attention on production and marketing of banking services and took few technological innovations that are more customized. In this Research article, the following technological innovations are considered that are related to Production and Marketing of banking services. Regarding production, banking products and services in digitalization era, such as Digital banking, Mobile banking are considered. In the case of Bank Marketing, Digital marketing, Mobile marketing are considered. They are listed very clearly as follows.

I. DIGITAL BANK PRODUCTS AND SERVICES

- a. Online banking with the help of bankers such as RTGS, NEFT, International money transfer by EFT, Cheque Truncation Scheme (CTS)
- b. Online banking by the customers, such as by having bank Apps, by doing transactions through bank websites
- c. Plastic money – By using Debit Card and Credit card, bank transactions may be done, such as Card swiping at shopping places, online money transfer from one card to another account, online money transfer at banks for taking DD etc.,
- d. In the case of mobile banking, SMS Banking, Call banking, Petty cash payments

II. DIGITAL MARKETING IN BANKS

- a. Personalised marketing by digital means
 - i. Email marketing,
 - ii. SMS marketing
- b. Marketing through websites, such as
 - i. social networking websites,
 - ii. Article marketing,
 - iii. Web advertisements
- c. Customer relationship and retention management practices
 - i. Automated SMS,
 - ii. Emails,
 - iii. Phone calls

Customer meet by video conferencing and Customer grievances solving by video conferencing

In this article, such above technological innovations are alone considered and they will be discussed in detail.

III RESEARCH METHODOLOGY:

This research article has been prepared to fulfill a couple of objectives. First, to know the usage level and satisfactory level of digital banking services and offering suggestions for the improvement. Second, to understand the usage level and satisfactory level of digital marketing of banking services and offering suggestions for the improvement. The Study has been made in Chennai. Primary data have been collected during the year 2017 – 2018. In this article, primary data have been presented that were collected from the customers of various banks in Chennai. Multi Stage Quota Sampling method has been followed. In Chennai, there are 2034 bank branches. Among them, based upon number of branches availability in Chennai, certain banks were selected for contacting customers, like private sector, public sector and foreign banks. Among them, 6 private sector banks, 6 public sector banks and 3 foreign banks were selected based upon number of branches in Chennai (15 branches). From each and every bank branch, 30 customers were contacted, thereby 450 customers were contacted (15 branches * 30 customers = 450 customers) for collecting primary data. This sampling size of 450 customers, has been decided based upon the law of inertia and law of statistical regularity. The bank customers who have been using digital banking were contacted for conducting this study purpose. Customers who do not know anything about Digital banking transactions were not contacted for this study. Because, the

customers who have been using digital banking can alone say constructive information about it. Unaware customers cannot say such things. Such 450 customers were contacted by having quota of criteria as follows.

Public Sector Bank customers :

9 Banks * 30 customers = 270 customers

Such 9 banks are SBI, UBI, IDBI BANK, PNB, IOB, Corporation Bank, Central Bank of India, Bank of India and Andhra Bank (Uniformly 40 customers were selected from each bank)

Private Sector Bank customers :

6 Banks * 30 customers = 180 customers

Such 6 banks are HDFC Bank, ICICI Bank, Axis Bank, Indus Ind Bank, Karnataka Bank and South Indian Bank (Uniformly 40 customers were selected from each bank)

Such 600 customers were contacted, by bifurcating Corporate Banking customers (300) and Retail Banking customers (300 customers).

Corporate Banking customers (225 customers) :

Manufacturers = 75 customers

Traders / Shop keepers = 75 customers

Service Business = 75 customers

Retail Banking customers (225 customers) :

Independent Professionals = 75 customers

Employees = 75 customers

Students & Home makers = 75 customers

Totally 522 customers were contacted and filtered into 450 for this research purpose. Due care has been taken by the Researcher to avoid or minimize various errors namely, sampling error, Data errors, Statistical errors (Type I error and Type II errors).

A research on Service Quality Excellence due to technological innovations has been made and some of the results are portrayed in this article. Likert Scaling technique, five point scale has been applied and analysed suitably. Besides, Spearman's Rank Correlation, Rank sum test, Wilcoxon Rank test are applied suitable to derive inferences suitably. A limitation is that only digital banking users were contacted for this study, who do not use this service were not contacted. In future, such customers may be contacted for further researches. Time constraint is yet another limitation.

IV DIGITAL BANK PRODUCTS AND SERVICES:

Banks have been offering various services now a days, due to the advent of Digital India and Digitalisation of Bank services. The following table highlights the same.

TABLE 1 - USAGE OF DIGITAL BANK PRODUCTS AND SERVICES

Digital banking services	Usage of services					Total	Weightage points	%	Rank
	VF	F	O	R	VR				
Card swiping for shopping	414 (92%)	36 (8%)	Nil	Nil	Nil	450 (100%)	2214	10.77	3
Card swiping at banks for bank transactions like taking DD	382 (84.89%)	30 (6.67%)	18 (4%)	12 (2.67%)	8 (1.77%)	450 (100%)	2116	10.29	6
Card using for online money transfer from one card to another account holder	276 (61.33%)	67 (14.89%)	44 (9.78%)	32 (7.11%)	31 (6.89%)	450 (100%)	1875	9.12	8
Real Time Gross Settlement	424 (94.22%)	18 (4%)	8 (1.78%)	Nil	Nil	450 (100%)	2216	10.78	1
National Electronic Fund Transfer	411 (91.33%)	22 (4.89%)	17 (3.78%)	Nil	Nil	450 (100%)	2194	10.67	4
Electronic Fund Transfer between countries (other currencies)	221 (49.11%)	74 (16.44%)	67 (14.89%)	53 (11.78%)	35 (7.78%)	450 (100%)	1743	8.48	10
Mobile banking by using smart phones – online bank transactions	421 (93.56%)	11 (2.44%)	10 (2.22%)	5 (1.11%)	3 (0.67%)	450 (100%)	2192	10.66	5
Online bank transactions by using computers through bank websites	428 (95.11%)	12 (2.67%)	7 (1.55%)	3 (0.67%)	Nil	450 (100%)	2215	10.77	2
Petty cash payments by Paytm or Mobikwik	321 (71.33%)	73 (16.22%)	32 (7.11%)	14 (3.11%)	10 (2.22%)	450 (100%)	2031	9.88	7
SMS banking – SMS codes transfer with banks	187 (41.56%)	121 (26.89%)	78 (10%)	45 (4.22%)	19 (4.22%)	450 (100%)	1762	8.58	9
Total							20,558	100.00	

Source : Primary data

Note 1 : Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: Weightage points : VF – Very frequently = 5; F – Frequently = 4; O – Occasionally = 3; R – Rarely = 2; VR – Very Rarely = 1; No – Never used or Not available in this bank = Not considered for points

It is learned from the above table that most of the people have been using RTGS from banks, online bank transactions and card swiping at the point of sale with merchants, NEFT from banks, mobile banking by using smart phones (First five ranks respectively). It is also observed that Paytm banking, SMS banking and EFT between countries are adopted by the customers at lower level.

Whether they are satisfied with such services or not, the following table presents the necessary information in this regard.

TABLE 2 - CUSTOMER SATISFACTION ON DIGITAL BANKING

Digital banking services	Satisfactory attitude					Total	Weightage points	Percentage	Rank
	HS	S	Neu	DS	HDS				
Card swiping for shopping	438 (97.33%)	11 (2.44%)	1 (0.22%)	Nil	Nil	450 (100%)	2237	10.75	2
Card swiping at banks for bank transactions like taking DD	352 (78.22%)	42 (9.33%)	36 (8%)	20 (4.45%)	Nil	450 (100%)	2076	9.97	7
Card using for online money transfer from one card to another account holder	282 (62.67%)	72 (16%)	48 (10.67%)	48 (10.67%)	Nil	450 (100%)	1938	9.32	8
Real Time Gross Settlement	426 (94.67%)	21 (4.67%)	3 (0.67%)	Nil	Nil	450 (100%)	2223	10.68	4
National Electronic Fund Transfer	421 (93.56%)	24 (5.33%)	5 (1.11%)	Nil	Nil	450 (100%)	2216	10.65	5
Electronic Fund Transfer between countries (other currencies)	218 (48.44%)	86 (19.11%)	79 (17.56%)	67 (14.89%)	Nil	450 (100%)	1805	8.67	9
Mobile banking by using smart phones – online bank transactions	442 (98.22%)	5 (1.11%)	3 (0.67%)	Nil	Nil	450 (100%)	2239	10.76	1
Online bank transactions by using computers through bank websites	438 (97.33%)	7 (1.56%)	5 (1.11%)	Nil	Nil	450 (100%)	2233	10.73	3
Petty cash payments by Paytm or Mobikwik	332 (73.78%)	81 (18%)	33 (7.33%)	4 (0.89%)	Nil	450 (100%)	2091	10.05	6
SMS banking – SMS codes transfer with banks	185 (41.11%)	112 (24.89%)	88 (19.56%)	50 (11.11%)	15 (3.33%)	450 (100%)	1752	8.42	10
Total							20,810	100.00	

Source : Primary data

Note 1 : Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: Weightage points : HS – Highly satisfied = 5; S – Satisfied = 4; Neu – Neutrally satisfied = 3; DS – Dissatisfied = 2; HDS – Highly dissatisfied = 1

The above table clearly reveals that the customers are highly satisfied with online banking using smart phones, followed by card swiping with shops, online banking by using personal computers, RTGS, NEFT from banks. Regarding Paytm, they want to know the technology completely well. Because the QR codes of merchants may not be capable of scanning by the video cameras of smart phones (sometimes). Besides, mobile network issue is the biggest problem. SMS banking is least preferred by the customers and they are least satisfied with this service. Some of them (65 customers) are not happy with this SMS banking service, because of SMS codes understanding issues, lack of patience to await for reply for SMS. Regarding EFT between countries or for other currencies, some of the customers are dissatisfied with the service, because of network issues and currency rate fluctuation problem. Few of them use the service of EFT between the countries rarely and very rarely for their business or professional purpose.

USAGE AND SATISFACTORY LEVEL OF DIGITAL BANKING SERVICES:

Based upon the usage of digital banking services, satisfactory level of digital banking services will be determined positively, neutrally, equally in a balanced manner. With this assumption, an analysis has been made. The results are portrayed as follows.

Hypothesis: Usage of Digital banking services and satisfactory level are correlated positively. Both are equally related to each other. Based upon the usage level, satisfactory level is also related neutrally in a balanced manner.

Suitable tests: Spearman's rank correlation, Rank sum test, Wilcoxon Rank test for paired data.

TABLE 3 – USAGE AND SATISFACTORY LEVEL OF DIGITAL BANKING SERVICES

Digital banking services	Usage of Digital banking services			Satisfactory level of Digital banking services			Rank Correlation	
	Weightage points	Rank (Corr)	Rank for Rank sum test	Weightage points	Rank (Corr)	Rank for Rank sum test	Difference of Rank (Corr)	D ²
Card swiping for shopping	2214	3	8	2237	2	2	+1	1
Card swiping at banks for bank transactions like taking DD	2116	6	11	2076	7	13	-1	1
Card using for online money transfer from one card to another account holder	1875	8	16	1938	8	15	0	0
Real Time Gross Settlement	2216	1	5.5	2223	4	4	-3	9
National Electronic Fund Transfer	2194	4	9	2216	5	5.5	-1	1
Electronic Fund Transfer between countries (other currencies)	1743	10	20	1805	9	17	+1	1
Mobile banking by using smart phones – online bank transactions	2192	5	10	2239	1	1	+4	16
Online bank transactions by using computers through bank websites	2215	2	7	2233	3	3	-1	1
Petty cash payments by Paytm or Mobikwik	2031	7	14	2091	6	12	+1	1
SMS banking – SMS codes transfer with banks	1762	9	18	1752	10	19	-1	1
Total		$\sum R1 =$	118.5		$\sum R2 =$	91.5		32

Source: Primary Data

Spearman's Rank Correlation = $[1 - (6\sum d^2 / n^2 (n-1))] = + 0.7867$;

Higher level positive degree of correlation

Two tailed p value for rank correlation = 0.00486. **Therefore, Relationship is strong, based on p value.**

Rank Sum test :

$$\mu = (m(m+n+1)) / 2 = 105$$

$$\text{Variance} = [(mn (m+n+1)) / 12] = 175$$

$$\text{Standard deviation} = \text{Square root of variance} = 13.2288$$

$$Z = \text{Difference between sum of R1 and R2} / \text{Standard Deviation} = (118.5 - 91.5) / 13.2288 = 2.041$$

Acceptance region of z at $\alpha = 0.01$ is 2.56

Calculated value of 2.041 is < Table value of acceptance region 2.56. Accept hypothesis

In the case of paired data, we can apply Wilcoxon Rank test. By applying this test, we find,

$$\sum R1 = 118.5; \quad \sum R2 = 91.5;$$

W value is 8 ; Z value is 1.9876; Standard deviation = 9.81;

Acceptance region of z at $\alpha = 0.01$ is 2.56

P value is 0.0233; Therefore, relationship is strong, based on p value.

Calculated value of 1.9876 is < Table value of acceptance region 2.56. Accept hypothesis

Therefore, hypothesis is accepted. Hence, it is interpreted that both usage of digital banking services and satisfactory level are neutral or balanced. It is inferred that the usage of digital banking services are strongly related with satisfactory level, with higher level of positive degree of correlation. Rank sum test tells that both usage of satisfactory level are related to each other equally at neutral level. Wilcoxon Rank test proves that usage level of digital banking services are equally related to satisfactory level.

BENEFITS OF DIGITAL BANKING SERVICES:

Due to the advent of Digital banking services, several advantages are there. The customers have been enjoying several benefits like Agility in banking services, Queueless banking, Paperless banking, Comfortable any time banking and the like. The following table brings forth the results in this regard.

TABLE 4 - BENEFITS OF DIGITAL BANKING SERVICES ENJOYED BY THE CUSTOMERS

Benefits	Satisfactory attitude					Total	Weightage points	Percentage	Rank
	HS	S	Neu	DS	HDS				
Agility in Banking Service (Quick service)	417 (92.67%)	28 (6.22%)	5 (1.11%)	Nil	Nil	450 (100%)	2662	12.71	5
Bank Queue is not needed	443 (98.45%)	5 (1.11%)	2 (0.44%)	Nil	Nil	450 (100%)	2691	12.85	1
Business prosperity happens because of faster banking transactions	422 (93.78%)	18 (4%)	10 (2.22%)	Nil	Nil	450 (100%)	2662	12.70	6
Comfortable banking is possible at any time, from anywhere	431 (95.78%)	13 (2.89%)	6 (1.33%)	Nil	Nil	450 (100%)	2675	12.77	4
Paperless banking	438 (97.33%)	10 (2.22%)	2 (0.45%)	Nil	Nil	450 (100%)	2686	12.82	3
Green banking is possible due to harmless electronics appliances	338 (75.11%)	76 (16.89%)	34 (7.56%)	2 (0.44%)	Nil	450 (100%)	2550	12.17	7
Economic Development is possible for every person, society and Nation	441 (98%)	8 (1.78%)	1 (0.22%)	Nil	Nil	450 (100%)	2690	12.84	2
Financial inclusion happens easily that facilitates inclusive banking growth	221 (49.11%)	139 (30.89%)	54 (12%)	32 (7.11%)	4 (0.89%)	450 (100%)	2337	11.14	8
Total							20,953	100.00	

Source : Primary data

Note 1 : Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: Weightage points: HS – Highly satisfied = 5; S – Satisfied = 5; Neu – Neutrally satisfied = 3; DS – Dissatisfied = 2; HDS – Highly dissatisfied = 1

It is very clear from the above table that Queueless banking, National Economic Development, Paperless banking, Any time convenient banking, Agility in banking services, Business prosperity are the major benefits enjoyed by the customers. It is also observed that Financial inclusion possibility will be possible at lower level, because of considering economically poor people also in banking line. Since, in India, some illiterates are there, digital banking services may not be convenient to them. Even though literates, some age old people do not have computer literacy. They do not like to accustom with the ultra modern digital banking services. Therefore, it will be very difficult for such people to adopt Digital Banking practices. Hence, financial inclusion will take place slowly with illiterates and people who lack computer literacy.

PROBLEMS OF MISUSE OF BANK ACCOUNTS SUFFERED BY THE CUSTOMERS:

It is very alarming to note that few customers suffered due to the digitalization of banking services. In the research, 15 customers out of 450 (3.33%) suffered from some issues like phone calls from strangers seeking pass word / PIN of ATM card and got deceived, theft of ATM card and purchases made and such problems. Such problems are highlighted in the following table.

TABLE 5 - PROBLEMS OF MISUSE OF BANK ACCOUNTS SUFFERED BY THE CUSTOMERS
(among 15 suffered customers out of 450 = 3.33%)

Misuse of bank accounts	Satisfactory attitude					Total Yes	Total No	Weightage points	Percentage	Rank
	HF	F	Neu	LF	VLF					
Account hacked by strangers and amount theft	3 (37.5%)	3 (37.5%)	2 (25%)	Nil	Nil	8 (100%)	7	33	8.33	6
Account hacked and halted, but amount safe. Later recovered	2 (40%)	2 (40%)	1 (20%)	Nil	Nil	5 (100%)	10	21	5.03	8
Phone calls seeking Pass word and PIN number and deceived, amount lost	13 (86.67%)	1 (6.67%)	1 (6.67%)	Nil	Nil	15 (100%)	Nil	72	18.28	1
Bank employees deceived the customers, but amount recovered after complaint	3 (37.5%)	2 (25%)	2 (25%)	1 (12.5%)	Nil	8 (100%)	7	31	7.83	7
SMS locking by hackers secretly	11 (73.33%)	3 (20%)	1 (6.67%)	Nil	Nil	15 (100%)	Nil	70	17.78	3
Misuse of credit card and money theft, by using its number and pass word that were saved in laptop	6 (40%)	5 (33.33%)	2 (13.33%)	1 (6.67%)	1 (6.67%)	15 (100%)	Nil	59	14.90	4
Theft of ATM card and purchases made	12 (80%)	2 (13.33%)	1 (6.67%)	Nil	Nil	15 (100%)	15	71	17.93	2
Loss of smart phone and misuse of bank account	7 (87.5%)	1 (12.5%)	Nil	Nil	Nil	8 (100%)	7	39	9.92	5
Total								396	100.00	

Source: Primary data

Note 1: Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: HF – Highly felt; F – Felt; Neu – Neutrally felt; LF – Least felt; VLF – Very least felt; No – Not felt.

Weightage points: HF – Highly felt = 5; F – Felt = 4; Neu – Neutrally felt = 3; LF – Least felt = 2; VLF – Very least felt = 1, No – Not considered.

The above table clearly informs us that stranger phone calls seeking pass words of online transactions, PIN number of ATM card is the major problem. They have lost their money because of this deceiving practice.

Theft of ATM Card and the thief purchased something from shops and once the balance is over, the card was thrown out in the garbage. Such customers noted their PIN number in their purse, along with ATM card. Such customers are the new customers for the usage of ATM card. When such customers are searching for help from somebody to withdraw money from ATM machine, some strangers got their pass words and took the card by telling that this card is having some problem and they took them. Like such things, several deceiving practices have been going on. Unless the customers are alert in this regard, they will be deceived very easily.

SMS locking happened with some customers for few days. Within such few days, several amount was stolen in the form of online bank transactions.

In the personal laptop or desktop computer, some of the customers use to save their password and card details in the bank website. Whenever they open the website, it will automatically login. On seeing such things, some strangers entered into the online bank logins and transferred money to their accounts through an artificial company account. Therefore, it is advisable not to save password in the personal computer or office computer. Suppose it is used by any stranger, or office person, he may misuse the bank account. Like this only, some deceiving practices happened with some bank customers.

Some of the customers (8 customers) have lost their smart phone, by misplacing somewhere. The strangers took such things and entered into their smart phone by using a specialized software. They changed the pattern or password for entering into such smart phones. Normally bank account logins will be opened very easily because the pass words will be saved in the phone itself. The strangers misused the account and amount was stolen away.

It is further alarming that bank online accounts were hacked by some strangers for 8 corporate customers. Then they lodged complaint with cyber crime police officer and finally they got it back.

All such above problems were performed by strangers. But it is heart burning to note that bank employees deceived the customers. After wards, the customers lodged complaint with bank head office and they got the amount back. Such bank employees were terminated afterwards. Such bank employees were Computer science engineering graduates who are the experts in hacking. Such problems happened with 8 corporate customers.

There is yet another issue. The online bank account would be hacked and halted by strangers. Such strangers would come as like they are computer service persons. They would demand money from the bank customers. If they give, they would release the halting. Such types of threatening practices are also going on.

COMMON PROBLEMS OF DIGITAL BANKING SERVICES:

Apart from the special issues as highlighted previously, some common problems are also prevailing in the society. Such problems are discussed as follows.

Lack of timely availability of money is the major problem in various banks. During Government holidays and Sundays, sufficient money is not available in various ATM centres. People need cash for meeting daily requirements from ordinary petty shops where card swiping machine is not at all available. Therefore, people do wander several places for withdrawing money. This becomes major worrisome problem for most of the customers.

Bank service charges are unreasonable and abnormal. Banks charge 2% (approx) on amount of purchase card swiping from merchants. In turn, shop keepers charge the same amount from us only. For ATM card usage, bank deducts Rs. 100 approximately for every month. But bank gives meager amount of Rs 1.5 for every cashless transaction. Bank gains more money in this regard. For every online transaction, Rs. 50 onwards would be deducted from the account based upon the amount of transactions. Therefore, more number of customers feel that bank service charges are more and unreasonable.

Power fluctuation is yet another biggest issue. Suppose it happens, the entry would be made without actual transmission in bank online transaction. UTR will be generated, but actual transmission may not happen (Unique Transaction Reference Number). Like this, several problems are going on.

Network problem during natural disasters is unavoidable. Several people suffered a lot during flood times in Chennai and during Vartha cyclone times in Chennai. Some times, due to technical problems, network problem may happen. This causes more problems in online bank transactions. Such network problems may create double debit entry in online bank transactions. After wards, solving the same will take more time.

In case of cashless digital transactions, complaint formalities are more stringent. Bank employees exhibit lethargic attitude to solve such complaints. Besides, complaint registration formalities are not clear. Customer do wander without understanding to whom they have to meet and redress their grievances.

ATM machine troubles are many. Amount may be debited without delivering money. Therefore, customers have to wander to the concerned bank for solving this issue.

Bank employees are not well trained in digital banking. Bank manager does not have competency in this regard. Training is not given to them systematically, but they are forced to take care of digital transactions. Left with no other alternative, bank officers try to learn themselves. But some mistakes do happen. RTGS / NEFT mistake entry happens. Then, banker himself solves the issue.

TABLE 6 - COMMON PROBLEMS OF DIGITAL BANKING SERVICES FELT BY THE CUSTOMERS

Misuse of bank accounts	Satisfactory attitude					Total Yes	Total No	Weightage points	Percentage	Rank
	HF	F	Neu	LF	VLF					
Frequent SMSes disturb unnecessarily	120 (26.67%)	57 (12.67%)	46 (10.22%)	90 (20%)	137 (30.44%)	450 (100%)	Nil	1283	6.68	9
Poor network problem due to natural disasters	380 (84.44%)	62 (13.78%)	8 (1.78%)	Nil	Nil	450 (100%)	Nil	2172	11.31	4
Poor network issues created by service providers often	217 (48.22%)	78 (17.33%)	64 (14.22%)	42 (9.33%)	49 (10.89%)	450 (100%)	Nil	1722	8.97	7
ATM machine troubles – Debiting account without delivery of amount	118 (26.22%)	67 (14.89%)	38 (8.44%)	44 (9.78%)	183 (40.67%)	450 (100%)	Nil	1243	6.47	10
Double entry or problem happens due to network issues in online banking	121 (26.89%)	59 (13.11%)	49 (10.89%)	87 (19.33%)	134 (29.78%)	450 (100%)	Nil	1296	6.75	8
Wrong transfer happens due to clerical mistake by banker in RTGS / NEFT	Nil	Nil	3 (23.08%)	4 (30.77%)	6 (46.15%)	13 (100%)	437	23	0.12	13
Time taken to recover money due to Digital transactions is abnormal (> 1 week)	Nil	8 (12.31%)	16 (24.62%)	19 (29.23%)	22 (33.84%)	65 (100%)	385	140	0.73	12
Complaint registration formalities are not clear and bank employees make customers to wander	211 (46.89%)	84 (18.67%)	67 (14.89%)	45 (10%)	43 (9.55%)	450 (100%)	Nil	1725	8.99	6
Bank employees are not well trained in Digital banking	116 (25.78%)	63 (14%)	33 (7.33%)	31 (6.89%)	207 (46%)	450 (100%)	Nil	1200	6.25	11
Complaint formalities are stringent and bank employees are lethargic in handling them	223 (49.56%)	97 (21.56%)	86 (19.11%)	34 (7.56%)	10 (2.22%)	450 (100%)	Nil	1839	9.58	5
Lack of timely availability of money due to ATM issue or online banking issue	416 (92.44%)	18 (4%)	10 (2.22%)	4 (0.89%)	2 (0.45%)	450 (100%)	Nil	2192	11.42	1
Power fluctuation or	383 (85.11%)	64 (14.22%)	2 (0.44%)	1 (0.22%)	Nil	450 (100%)	Nil	2179	11.35	3

Sudden power failure destroys payment processing and it creates wrong debit										
Bank service charges are abnormal	386 (85.78%)	63 (14%)	1 (0.22%)	Nil	Nil	450 (100%)	Nil	2185	11.38	2
Total								19,199	100.00	

Source: Primary data

Note 1: Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: Weightage points: HF – Highly felt = 5; F – Felt = 4; Neu – Neutrally felt = 3; LF – Least felt = 2; VLF – Very least felt = 1; No – Not considered

The table number 5 clearly portrays various problems. They are described here one by one as per the order of ranks of customer suffering. Lack of timely availability of money in ATMs is the major problem (Rank 1), followed by Unreasonable bank service charges (Rank 2), Wrong entries due to power fluctuations and network issues (Rank 3 & 4).

IMPROVEMENTS EXPECTED IN DIGITAL BANKING SERVICES:

“Necessity is the mother of invention”. Since some problems are there in Digital banking, certain improvements are suggested by the customers to resolve the same suitably. The following table provides such information.

TABLE 7 - ATTITUDE ON IMPROVEMENTS EXPECTED IN DIGITAL BANKING SERVICES

Improvement of Digital banking	Satisfactory attitude					Total	Weightage points	Percentage	Rank
	MNP	NP	Neu	O	LN				
Clear directions are needed for complaints management	385 (85.56%)	63 (14%)	2 (0.44%)	Nil	Nil	450 (100%)	2183	12.94	1
A specialized software on Complaints management system is needed	225 (40%)	96 (21.33%)	85 (18.89%)	34 (7.56%)	10 (2.22%)	450 (100%)	1842	10.92	4
Need for having toll free number for each and every bank for 24/7	223 (49.55%)	97 (21.56%)	86 (19.11%)	34 (7.56%)	10 (2.22%)	450 (100%)	1839	10.90	5
Systematic ATM machine maintenance is needed to avoid repairs	120 (26.67%)	66 (14.67%)	37 (8.22%)	44 (9.78%)	183 (40.66%)	450 (100%)	1246	7.38	7
Systematic monitoring mechanism is needed for ensuring money availability in ATMs	118 (26.22%)	67 (14.89%)	38 (8.44%)	44 (9.78%)	183 (40.67%)	450 (100%)	1243	7.37	9
Paytm workings should be educated to all	381 (84.67%)	61 (13.55%)	8 (1.78%)	Nil	Nil	450 (100%)	2173	12.88	3
Need for information security management	218 (48.44%)	77 (17.11%)	64 (14.22%)	42 (9.33%)	49 (10.89%)	450 (100%)	1723	10.21	6
Need for forensic accounting practices	116 (25.78%)	63 (14%)	33 (7.33%)	31 (6.89%)	207 (46%)	450 (100%)	1200	7.11	10
Need for information system audit to avoid cyber crimes & frauds in all the bank branches	119 (26.44%)	66 (14.67%)	38 (8.45%)	44 (9.78%)	183 (40.67%)	450 (100%)	1244	7.37	8
Banks need to develop Apps for doing online bank transactions smoothly	385 (85.56%)	63 (14%)	1 (0.22%)	1 (0.22%)	Nil	450 (100%)	2182	12.92	2
Total							16,875	100.00	

Source : Primary data

Note 1 : Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: Weightage points : MNP – Most Necessary and top priority = 5; N – Necessary and moderate priority = 4; Neu – Neutrally necessary (moderately) = 3; O – Optional = 2; LN – Least necessary = 1

Most of the customers feel that clear directions are needed for complaint management (Rank 1) and a software on complaints management system is needed. This software has to forward the complaints to the appropriate officials. Banks need to develop Apps for doing online bank transactions smoothly (Rank 2). Very few banks have been doing this, such as ICICI, SBI, City Union Bank and the like. Paytm workings have to be educated to all in a simple manner (Rank 3). There is a need for having toll free number for each and every bank for 24/7 hours (Rank 5). Information security management is MUST (Rank 6).

DIGITAL MARKETING OF BANK SERVICES:

Due to the advent of IoT (Internet of things), various digital marketing practices have been followed by the bankers. Certain digital marketing practices disturb them and some of them are useful to the customers. What such marketing services have been reaching the customers? The following table provides such details.

TABLE 8 - USAGE OF DIGITAL MARKETING OF BANK SERVICES

Digital Marketing Services	Usage of services					Total	Weightage points	Percentage	Rank
	VF	F	O	R	VR				
Automated Greeting SMSes on Common festivals	332 (73.78%)	81 (18%)	33 (7.33%)	4 (0.89%)	Nil	450 (100%)	2091	9.64	4
Automated Greeting SMSes on special festivals like birth days, wedding anniversaries	221 (49.11%)	74 (16.44%)	67 (14.89%)	53 (11.78%)	35 (7.78%)	450 (100%)	1743	8.03	10
Tele calling by bank employees and explaining about various schemes	331 (73.56%)	82 (18.22%)	32 (7.11%)	5 (1.11%)	Nil	450 (100%)	2089	9.63	5
Tele calling by Automated computer voice	276 (61.33%)	67 (14.89%)	44 (9.78%)	32 (7.11%)	31 (6.89%)	450 (100%)	1875	8.64	7
Sending Emails to customers about various schemes (individual emails)	222 (49.33%)	73 (16.22%)	68 (15.11%)	52 (11.56%)	35 (7.78%)	450 (100%)	1745	8.04	9
Sending massive emails to customers about various schemes	414 (92%)	36 (8%)	Nil	Nil	Nil	450 (100%)	2214	10.21	1
Customer meet Over phone / Audio conferencing / video conferencing and customer grievance handling	185 (41.11%)	112 (24.89%)	88 (19.56%)	50 (11.11%)	15 (3.33%)	450 (100%)	1752	8.07	8
SMS advertisements (individual)	220 (48.89%)	75 (16.67%)	66 (14.67%)	52 (11.56%)	37 (8.22%)	450 (100%)	1739	8.01	11
SMS advertisements (massive)	413 (91.78%)	34 (7.55%)	3 (0.67%)	Nil	Nil	450 (100%)	2210	10.19	3
Article making (Bank uniqueness) and content marketing	319 (70.89%)	75 (16.67%)	32 (7.11%)	14 (3.11%)	10 (2.22%)	450 (100%)	2029	9.35	6
Web advertisements, Pop up ads, desktop notifications	413 (91.78%)	35 (7.78%)	2 (0.44%)	Nil	Nil	450 (100%)	2211	10.19	2
Total							21698	100.00	

Source: Primary data

Note 1: Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: Weightage points: Very Frequently = 5 points; Frequently = 4 points; Occasionally = 3 points; Rarely = 2 points; Very Rarely = 1 point; No = Not considered

Massive emails reach customers (Rank 1), followed by web advertisements, pop up advertisements and desktop notifications (Rank 2), Massive SMS advertisements (Rank 3), Automated SMSes on common festivals (Rank 4), Automated SMSes on family festivals like birthdays (Rank 5), Content marketing (Rank 6), Tele calling by computer voice (Rank 7),

Telecalling by employees for grievances solving (Rank 8) and, sending emails to individuals and individual SMS (Rank 9 and 10).

CUSTOMER SATISFACTION ON DIGITAL MARKETING OF BANKING SERVICES :

Various such services have been offered by the bankers. To what extent, it has given satisfaction to the customers. The following table brings forth the necessary results.

TABLE 9 - CUSTOMER SATISFACTION ON DIGITAL MARKETING OF BANKING SERVICES

Digital banking services	Satisfactory attitude					Total	Weightage points	Percentage	Rank
	HS	S	Neu	DS	HDS				
Automated SMSes on Common festivals	331 (73.56%)	82 (18.22%)	34 (7.56%)	3 (0.44%)	Nil	450 (100%)	2091	9.64	5
Automated SMSes on special festivals like birth days, wedding anniversaries	332 (73.78%)	81 (18%)	35 (7.78%)	2 (0.44%)	Nil	450 (100%)	2093	9.65	4
Tele calling by bank employees and explaining about various schemes	318 (70.67%)	76 (16.89%)	31 (6.89%)	14 (3.11%)	11 (2.44%)	450 (100%)	2026	9.34	6
Tele calling by Automated computer voice	275 (61.11%)	66 (14.67%)	45 (10%)	33 (7.33%)	31 (6.89%)	450 (100%)	1871	8.63	7
Sending Emails to customers about various schemes (individual emails)	413 (91.78%)	34 (7.56%)	3 (0.67%)	Nil	Nil	450 (100%)	2210	10.19	2
Sending massive emails to customers about various schemes	222 (49.33%)	73 (16.22%)	68 (15.11%)	51 (11.34%)	36 (8%)	450 (100%)	1744	8.04	9
Customer meet by video conferencing and customer grievance handling	184 (40.89%)	113 (25.11%)	89 (19.77%)	49 (10.89%)	15 (3.33%)	450 (100%)	1752	8.08	8
SMS advertisements (individual)	413 (91.78%)	35 (7.78%)	2 (0.44%)	Nil	Nil	450 (100%)	2211	10.19	1
SMS advertisements (massive)	221 (49.11%)	74 (16.44%)	67 (14.89%)	53 (11.78%)	35 (7.78%)	450 (100%)	1743	8.04	10
Article making (Bank uniqueness) and content marketing	220 (48.89%)	75 (16.67%)	66 (14.67%)	54 (12%)	35 (7.77%)	450 (100%)	1741	8.03	11
Web advertisements, Pop up ads, desktop notifications	413 (91.78%)	34 (7.56%)	3 (0.67%)	Nil	Nil	450 (100%)	2210	10.19	3
Total							21692	100.00	

Source: Primary data

Note 1: Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: HS – Highly satisfied; S – Satisfied; Neu – Neutrally satisfied; DS – Dissatisfied; HDS – Highly dissatisfied

Weightage points : HS – Highly satisfied = 5; S – Satisfied = 4; Neu – Neutrally satisfied = 3; DS – Dissatisfied = 2; HDS – Highly dissatisfied = 1

Individual SMS advertisements reach the customers and impress them to select appropriate financial schemes from banks (Rank 1). Such advertisements bring the necessary awareness to the people, since SMSes reach them in person in their hands. Similarly, individual emails to customers, web advertisements, pop up ads and desktop notifications bring them necessary awareness to the people (Rank 2 and 3). Some of the banks do tele calling services to their customers and explain various schemes. Such things create very good impact in the minds of the customers. This gives personal touch to the customers (Rank 4). Tele calling by computerized voice also creates impact with the customers to some extent (Rank 7). Automated SMSes on common festivals (Rank 5) and Automated SMSes on family festivals like birth days and marriage anniversaries make the customers happy personally on their bankers (Rank 6). Massive email advertisements, Massive SMSes do create less impact in the minds of the people, since such things may go as spamming (Rank 9 & 10). Some banks use to write articles and use to upload the same in internets. Whenever any body searches such titled articles as key words or taglines, such articles will come in searches. The customers may go through and try to contact the concerned banker. This is known as Article making and content marketing. Some times such articles may misguide the customers (Rank 11).

USAGE AND SATISFACTORY LEVEL OF DIGITAL MARKETING OF BANKING SERVICES:

Based upon the usage of digital marketing of banking services, satisfactory level of digital marketing of banking services will be determined positively, neutrally, equally in a balanced manner. With this assumption, an analysis has been made. The results are portrayed as follows.

Hypothesis: Usage of Digital marketing of banking services and satisfactory level are correlated positively. Both are equally related to each other. Based upon the usage level, satisfactory level is also related neutrally in a balanced manner.

Suitable tests: Spearman's rank correlation, Rank sum test, Wilcoxon Rank test for paired data.

TABLE 10 – USAGE AND SATISFACTORY LEVEL OF DIGITAL BANKING SERVICES

Digital marketing of banking services	Usage of Digital marketing of banking services			Satisfactory level of Digital marketing of banking services			Rank correlation	D ²
	Weightage points	Rank (Corr)	Rank for Rank sum test	Weightage points	Rank (Corr)	Rank for Rank sum test	Difference of Ranks	
Automated SMSes on Common festivals	2091	4	8.5	2091	5	8.5	-1	1
Automated SMSes on special festivals like birth days, wedding anniversaries	1743	10	19.5	2093	4	7	+6	36
Tele calling by bank employees and explaining about various schemes	2089	5	10	2026	6	12	-1	1
Tele calling by Automated computer voice	1875	7	13	1871	7	14	0	0
Sending Emails to customers about various schemes (individual emails)	1745	9	17	2210	2	4	+7	49
Sending massive emails to customers about various schemes	2214	1	1	1744	9	18	-8	64
Customer meet by video conferencing and customer grievance handling	1752	8	15.5	1752	8	15.5	0	0
SMS advertisements (individual)	1739	11	22	2211	1	2.5	+10	100
SMS advertisements (massive)	2210	3	4	1743	10	19.5	-7	49
Article making (Bank uniqueness) and content marketing	2029	6	11	1741	11	21	-5	25
Web advertisements, Pop up ads, desktop notifications	2211	2	2.5	2210	3	4	-1	1
Total		$\sum R1$ =	124		$\sum R2$ =	126		326

Source: Primary Data

Spearman's Rank Correlation = $[1 - (6\sum d^2 / n^2 (n-1))] = -0.451026$; R = -0.45

Moderate level negative degree of correlation

Two tailed p value for rank correlation = 0.16382. **Therefore, Relationship is very weak, based on p value.**

Rank Sum test:

$$\mu = (m(m+n+1)) / 2 = 126.5$$

$$\text{Variance} = [(mn(m+n+1)) / 12] = 231.92$$

$$\text{Standard deviation} = \text{Square root of variance} = 15.2289$$

$$Z = \text{Difference between sum of R1 and R2} / \text{Standard Deviation} = (124 - 126) / 15.2289 = -0.1313$$

Acceptance region of z at $\alpha = 0.01$ is 2.56

Calculated value of -0.1313 is < Table value of acceptance region 2.56. Accept hypothesis

In the case of paired data, we can apply **Wilcoxon Rank test**. By applying this test, we find,

$$\sum R1 = 124; \quad \sum R2 = 126;$$

W value is 20; Z value is -0.2962;

Acceptance region of z at $\alpha = 0.01$ is 2.56

Calculated value of -0.2962 is < Table value of acceptance region 2.56. Accept hypothesis

Therefore, hypothesis can be accepted negatively. Hence, it is interpreted that both usage of digital marketing of banking services and satisfactory level are neutral or balanced negatively. It is inferred that the usage of digital marketing of banking services are negatively related with satisfactory level, with moderate level of negative degree of correlation. Rank sum test tells that both usage of satisfactory level are related to each other equally at neutral level, but negatively. Wilcoxon Rank test proves that usage level of digital banking services are equally related to satisfactory level, but negatively.

The detailed analysis brings forth that massive SMSes, massive Emails, desktop notifications, pop up ads, Content marketing are all reaching the customers, but do not create much impact, because of impersonalisation. But, individual SMSes, individual Emails, personal tele calling of bank employees, Conference calls are all creating very good impacts in the minds of the customers.

BENEFITS OF DIGITAL MARKETING OF BANKING SERVICES:

Customers do enjoy various benefits such as availing bank loans, making bank deposits in tax saving schemes, getting financial advices in time and so on. Such benefits are highlighted in the following table.

TABLE 11 - BENEFITS OF DIGITAL MARKETING OF BANKING SERVICES ENJOYED BY THE CUSTOMERS

Benefits	Satisfactory attitude					Total	Weightage points	Percentage	Rank
	HS	S	Neu	DS	HDS				
Availed loan services (Vehicle, Home, Jewellery) because of loan schemes information	221 (49.11%)	74 (16.44%)	67 (14.89%)	53 (11.78%)	35 (7.78%)	450 (100%)	1743	13.27	6
Made deposits because of deposit information	184 (40.89%)	113 (25.11%)	89 (19.77%)	49 (10.89%)	15 (3.33%)	450 (100%)	1752	13.33	5
Got financial advices in time – Tax savings	318 (70.67%)	76 (16.89%)	31 (6.89%)	15 (3.33%)	10 (2.22%)	450 (100%)	2027	15.42	3
Got investment related advices in time	317 (70.44%)	77 (17.11%)	30 (6.67%)	14 (3.11%)	12 (2.67%)	450 (100%)	2023	15.39	4
Satisfied with bank employees due to their timely tele calling services	331 (73.56%)	82 (18.22%)	34 (7.56%)	3 (0.44%)	Nil	450 (100%)	2091	15.91	2
Satisfied with bank services because of technological advancements	413 (91.78%)	34 (7.56%)	3 (0.67%)	Nil	Nil	450 (100%)	2210	16.82	1
Delighted with surprise bank gifts, reward points on customer day celebration	121 (26.89%)	59 (13.11%)	49 (10.89%)	87 (19.33%)	134 (29.78%)	450 (100%)	1296	9.86	7
Total							13,142	100.00	

Source: Primary data

Note 1: Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: HS – Highly satisfied; S – Satisfied; Neu – Neutrally satisfied; DS – Dissatisfied; HDS – Highly dissatisfied

Weightage points: HS – Highly satisfied = 5; S – Satisfied = 4; Neu – Neutrally satisfied = 3; DS – Dissatisfied = 2; HDS – Highly dissatisfied = 1

It is very clear that the bank customers get satisfaction with the technological advancements of the banks (Rank 1), followed by satisfaction with the bank employees and their services (Rank 2), timely financial advices to the customers like tax savings schemes, investment related financial advices (Rank 3 and 4). Some of them made deposits because of such advices (Rank 5) and availed loan services (Rank 6). Some of the customers are delighted with the services of bankers (Rank 7).

COMMON PROBLEMS ON DIGITAL MARKETING OF BANKING SERVICES:

Even though several positive benefits are there in digital marketing of banking services, some common problems are there, such as lack of financial touch or personalization, some SMSes, Emails, Desktop notifications disturb them. Such details are portrayed in the following table.

TABLE 12 - COMMON PROBLEMS ON DIGITAL BANKING SERVICES FELT BY THE CUSTOMERS

Misuse of bank accounts	Satisfactory attitude					Total	Weightage points	Percentage	Rank
	HF	F	Neu	LF	VLF				
Lack of human touch or personalization	120 (26.67%)	57 (12.67%)	46 (10.22%)	90 (20%)	137 (30.44%)	450 (100%)	1283	15.21	4
Certain promotional ads and desktop notifications pop up and disturb us	386 (85.78%)	63 (14%)	1 (0.22%)	Nil	Nil	450 (100%)	2185	25.89	1
Frequent SMSes disturb unnecessarily	121 (26.89%)	59 (13.11%)	49 (10.89%)	87 (19.33%)	134 (29.78%)	450 (100%)	1285	15.23	3
Frequent Emails disturb us as like spamming	122 (27.11%)	55 (12.22%)	57 (10.44%)	90 (20%)	136 (30.22%)	450 (100%)	1287	15.25	2
Certain fraudulent web ads do misrepresentation	116 (25.78%)	63 (14%)	33 (7.33%)	31 (6.89%)	207 (46%)	450 (100%)	1200	14.22	5
Certain articles in Content marketing misguide us	115 (25.56%)	64 (14.22%)	33 (7.33%)	30 (6.67%)	208 (46.22%)	450 (100%)	1198	14.20	6
Total							8438	100.00	

Source: Primary data

Note 1: Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: HF – Highly felt; F – Felt; Neu – Neutrally felt; LF – Least felt; VLF – Very least felt; No – Not felt

Weightage points: HF – Highly felt = 5; F – Felt = 4; Neu – Neutrally felt = 3; LF – Least felt = 2; VLF – Very least felt = 1; No – Not considered

It is inferred from the above table that certain promotional advertisements on desktop notifications (Rank 1), massive Emails (Rank 2), massive SMSes (Rank 3) disturb the bank customers. Such things create lack of human touch or personalization (Rank 4). Some advertisements do misrepresentation (Rank 5) and certain bank article in content marketing misguide the customers (Rank 6).

SUGGESTIONS ON IMPROVEMENTS:

Since some customers feel some problems in digital marketing of banking services, they suggest some improvements in the same. Digitalisation is virtual presence. Personalisation is needed for all the human beings. People want virtual presence with personalization. Need based SMSes, Emails, tele calling are all expected by the customers by and large. Loyalty banking reward points have to be awarded based on the amount of transactions, rather than number of transactions for the usage of cashless transactions. All such results are brought to the following table.

TABLE 13 - ATTITUDE ON IMPROVEMENTS EXPECTED IN DIGITAL MARKETING OF BANKING SERVICES

Improvement of Digital banking	Satisfactory attitude					Total	Weightage points	Percentage	Rank
	MNP	NP	Neu	O	LN				
Apart from internet ads, bank employees have to contact customers in person also and explain every thing	386 (85.78%)	62 (13.78%)	2 (0.44%)	Nil	Nil	450 (100%)	2184	14.27	4
Instead of frequent SMSes and Emails, need based such things are wanted	416 (92.44%)	18 (4%)	10 (2.22%)	4 (0.89%)	2 (0.45%)	450 (100%)	2192	14.32	3
Personalised attention is needed	417 (92.67%)	17 (3.78%)	11 (2.44%)	3 (0.67%)	2 (0.44%)	450 (100%)	2194	14.33	2
Need based financial advices such as Tax management, savings, safety of money are needed to be given	383 (85.11%)	64 (14.22%)	2 (0.44%)	1 (0.22%)	Nil	450 (100%)	2179	14.24	6
Banks need to offer their best service, integrated with digitalization and personalization together	418 (92.89%)	16 (3.55%)	12 (2.67%)	2 (0.45%)	2 (0.44%)	450 (100%)	2196	14.35	1

Loyalty banking reward points for cashless digital transactions should be based on volume of transactions rather than number of transactions	382 (84.89%)	65 (14.44%)	3 (0.67%)	Nil	Nil	450 (100%)	2179	14.24	7
Loyalty banking reward points for cashless digital transactions should be given more for savings bank account in order to encourage individual customer in retail banking	386 (85.78%)	61 (13.55%)	3 (0.67%)	Nil	Nil	450 (100%)	2183	14.26	5
Total							15,307	100.00	

Source: Primary data

Note 1: Percentages are available in brackets. Such percentages were calculated based on number of respondents responded to that particular question (mentioned in rows)

Note 2: Weightage points: MNP – Most Necessary and top priority = 5; N – Necessary and moderate priority = 4; Neu – Neutrally necessary (moderately) = 3; O – Optional = 2; LN – Least necessary = 1

Banks MUST offer digital banking services integrated with personalization and personal touch or individual attention is important (Rank 1 and 2). Instead of frequent SMSes and Emails, need based such things may be sent to the customers (Rank 3). Apart from internet ads, employees need to contact the bank customers in person and do create impact on them (Rank 4). Loyalty reward points should be given for savings bank account more. Thereby individual retail banking will flourish. For current account holders, reward points should be given in some other scale for encouraging corporate banking (Rank 5). Reward points for loyalty banking may be given based upon the volume of amount of transaction, rather of number of transactions. This will encourage the customers (Rank 6).

V CONCLUSION:

People in India cannot ignore and escape from digitalization of banking services and digital marketing of banking services. Several advancements have been going on. Challenges need to be solved suitably. Forensic accounting practices and auditing are more important in Digital banking. Besides, Information system security is a fundamental need of the hour. Then only, customers can trust on digital banking and they will come up. In India, several traditional old aged persons are there who use only cash transaction and they do not like to go for digital banking. Several computer illiterates are also there. Therefore, banks have to educate their customers, potential customers and the public by and large (including village people) for teaching about digital banking services, how to use them and all. The Banks MUST do this service as a part of their Corporate Social Responsibilities COMPULSORILY. Then only Financial inclusion will be possible and this results in inclusive banking growth in Indian Economy. Once we attain 100% financial inclusion, our Indian Economy will witness tremendous economic growth constructively.

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