CHAPTER – IV

CONSUMER BEHAVIOUR AND SELF-SERVICE TECHNOLOGIES IN BANKING SECTOR

4.1 CONSUMER BEHAVIOUR

4.1.1 Definition of Consumer behaviour

“Consumer behaviour refers to the actions and decision processes of people who purchase goods and services for personal consumption.” (Peter D. Bennett, ed. Dictionary of Marketing Terms, 2nd ed. 1995)

Consumer behaviour refers to “the mental and emotional processes and the observable behaviour of consumers during searching for, purchasing and post consumption of a product or service.” (James F. Engel, Roger D. Blackwell and Paul W. Miniard, “Consumer Behaviour” (1990)).

According to Louden and Bitta, ‘consumer behaviour is the decision process and physical activity, which individuals engage in when evaluating, acquiring, using or disposing of goods and services’.

4.2 NATURE OF CONSUMER BEHAVIOUR

The study of consumer behaviour is the study of how individuals make decisions to spend their available resources (time, money, effort) on consumption related items. It includes the study of what they buy, why they buy it, when they buy it, where they buy it, how often they buy it, and how often they use it. The various factors that influence the consumer behaviour are as follows:

- Marketing factors such as product design, price, promotion, packaging, positioning and distribution.
- Personal factors such as age, gender, education and income level.
- Psychological factors such as buying motives, perception of the product and attitudes towards the product.
- Situational factors such as physical surroundings at the time of purchase, social surroundings and time factor.
- Social factors such as social status, reference groups and family.
- Cultural factors, such as religion, social class - caste and sub-castes.

Figure 4.1 FACTORS AFFECTING CONSUMER BEHAVIOUR

4.2.1 Personal factors

They include such variables as age and lifecycle stage, occupation, economic circumstances, lifestyle (activities, interests, opinions and demographics), personality and self concept. They may explain why our preferences often change as our 'situation' changes. Decisions and buying behavior are obviously influenced by the characteristics of each consumer.
A consumer does not buy the same products or services at his 20 and 70 years. His lifestyle, values, environment, activities, hobbies and consumer habits evolve throughout his life. Age and life-cycle have potential impact on the consumer is buying behavior. It is obvious that the consumers change their attitude in purchase of goods and services with the passage of time. Family life-cycle consists of different stages such as young singles, married couples, and unmarried couples etc which help marketers to develop appropriate products for each stage. For example, during his life, a consumer could change his diet from unhealthy products (fast food, ready meals, etc.) to a healthier diet, during mid-life with family before following a little later a low cholesterol diet to avoid health problems.

The factors influencing the buying decision process may also change. For example, the social value of a brand generally plays a more important role in the decision of a consumer at 25 than at 65 years. The family life cycle of the individual also has an influence on his values, lifestyles and buying behavior depending on whether he is single, in a relationship, in a relationship with kids, etc. as well as the region of the country and the kind of city where he lives (large city, small town, country side, etc.) For a brand or a retailer, it may be interesting to identify, understand, measure and analyze what are the criteria and personal factors that influence the shopping behavior of their customers in order to adapt. For example, it is more possible that consumers living in New York do not have the same behavior and purchasing habits than the ones in Nebraska. For a retailer, to have a deep understanding and adaptation to these differences will be a real asset to increase sales.
4.2.1.1 Lifestyle

The lifestyle of an individual includes all his activities, interests, values and opinions. The lifestyle of a consumer will influence his behavior and purchasing decisions. For example, a consumer with a healthy and balanced lifestyle will prefer to eat organic products and go to specific grocery stores, will do some jogging regularly (and therefore will buy shoes, clothes and specific products), etc.

4.2.1.2 Personality and self-concept

Personality is a set of traits and specific characteristics of each individual. It is the product of the interaction of psychological and physiological characteristics of an individual and results in constant behaviors. It materializes into some traits such as confidence, sociability, autonomy, charisma, ambition, openness to others, shyness, curiosity, adaptability, etc. While the self-concept is the image that the individual has or would like to have of him it conveys to his entourage. For example, since its launch, Apple cultivates an image of innovation, creativity, boldness and singularity which is able to attract consumers who identify these values and who feel valued in their self-concept by buying a product from Apple.

4.2.1.3 Occupation

The occupation of a person has significant impact on his buying behavior. For example a marketing manager of an organization will try to purchase business suits, whereas a low level worker in the same organization will purchase rugged work clothes.

4.2.1.4 Economic Situation

Consumer’s economic situation has a great influence on his buying behavior. If the income and savings of a customer are higher then he will purchase more expensive
products. On the other hand, a person with low income and savings will purchase inexpensive products.

4.2.2 Psychological factors

They affect our purchase decision which includes motivation (Maslow's hierarchy of needs), perception, learning, beliefs and attitudes. Other people often influence a consumer's purchase decision. The marketer needs to know which people are involved in the buying decision and what role each person plays, so that marketing strategies can also be aimed at these people. Among the factors influencing consumer behavior, psychological factors can be divided into 4 categories: motivation, perception, learning as well as beliefs and attitudes.

4.2.2.1 Motivation

Motivation is that which drives consumers to develop a purchasing behavior. It is the expression of a need which becomes pressing enough to lead the consumer to want to satisfy it. It is usually working at a subconscious level and is often difficult to measure. The level of motivation also affects the buying behavior of customers. Every person has different needs such as physiological needs, biological needs, social needs etc. The nature of the needs is that, some of them are most pressing while others are least pressing. Therefore a need becomes a motive when it is more pressing to direct the person to seek satisfaction. Motivation is directly related to the need and is expressed in the same type of classification as defined in the stages of the consumer buying decision process. To increase sales and encourage consumers to purchase, brands should try to create, make conscious or reinforce a need in the consumer's mind so that he develops a purchase motivation. He will be much more interested in considering and buying their products. They must also note according to research, the type of product they sell and the
consumers they target, pick out the motivation and the need to which their product respond in order to make them appear as the solution to the consumers need.

4.2.2.2 Perception

Perception is a process through which an individual selects, organizes and interprets the information he receives in order to do something that makes sense. The perception of a situation at a given time may decide if and how the person will act. Selecting, organizing and interpreting information in a way to produce a meaningful experience of the world is called perception. There are three different perceptual processes which are selective attention, selective distortion and selective retention. In case of selective attention, marketers try to attract the customer’s attention. In case of selective distortion, customers try to interpret the information in a way that will support what the customers already believe.

4.2.2.3 Beliefs and attitudes

A belief is a conviction that an individual has on something. Through the experience he acquires, his learning and his external influences (family, friends and so on), he will develop beliefs that will influence his buying behavior. A customer possesses specific belief and attitude towards various products. Such beliefs and attitudes make up brand image and affect consumer’s buying behavior therefore marketers are interested in them. Marketers can change the beliefs and attitudes of customers by launching special campaigns in this regard. To change the brand a marketing message or adjust it’s positioning in order to get consumers to change their brand perception.

4.2.2.4 Satisfaction

Although satisfaction is not the variable that comes under the consumer variables it is indirectly related to it. Study of Boshoff and Gray argued that satisfaction doesn’t
depend upon the product or service itself rather it relies on the customer’s perception. Likewise, Cronin et al. states that satisfaction is a result of perception of the customer about the value received. Moreover, study of Choi et al. found that there is a positive influence of perceived value on the satisfaction. Therefore, it is understood that satisfaction level varies to customers experiencing the same level of services. It is also defined as “a cognitive or affective reaction that emerges in response to a single or prolonged set of service encounters”. Customer satisfaction is the most concern are of Islamic banking as if customers are satisfied it leads to customer loyalty and consequently to customer retention. Managers know the satisfied customer bring a lot of potential customer while the dis-satisfied customer will deprive the customer in future.

4.3 CONSUMER BEHAVIOUR IN THE CONTEXT OF THE FINANCIAL SERVICES INDUSTRY

As the present study focuses on consumer behaviour towards Self-Service Technologies in banks, it is important to shed light on consumer behaviour in the context of the financial services industry. Beckett (2000) mentions three characteristics that distinguish financial services, namely transparency of performance, uncertainty of outcome and poor comparability. Transparency of performance refers to the availability of information and to consumers’ ability to make evaluations based on that information (Laitos, 2008). By reason of the varying degrees of performance transparency, consumers might have difficulties in understanding and identifying the outcomes of some financial services. Some of the services are more transparent than others, such as information about credit cards and savings, while the available information and performance evaluations of a service, such as investment funds might prove difficult (Beckett, 2000).
Uncertainty of outcome refers to the role of services in giving consumers control over the uncertain external environment (Laitos, 2008). Beckett (2000) highlights that some financial services, such as money transactions or bank accounts, are designed to increase consumers’ control and thus make life easier by giving certain promises the future.

**Figure 4.2 Consumer Behaviour Matrixes**

To better understand consumer behaviour in the context of the financial services industry, Beckett et al. (2000) developed a matrix which is based on the work of Dwyer et al. (1987) and Thibaut & Kelly (1959). This matrix provides greater insights into the possible range of interaction modes. Beckett et al. (2000) claim that the advantage of this matrix is that it is developed based on economics, consumer behaviour and psychology. In this matrix, there are four quadrants and each one represents a different combination of involvement and uncertainty (see Figure 4.2.). These quadrants will be explained briefly in terms of the context of financial services based on Beckett et al. (2000) in the following paragraphs.

**4.3.1 Repeat-Passive**

Customers, in this quadrant, have low levels of involvement and limited perception of uncertainty with a financial service because they are fully aware of the
service’s salient features. These customers can be described as ‘passive’ in the sense that they will make repeated interactions without actively looking for alternatives.

4.3.2 Rational-Active

In this quadrant, customers’ involvement with regard to the process dimensions of control, participants and contact, and their confidence with regards to financial services complexity and certainty of outcome are all high. These customers have the ability and inclination to make carefully considered decisions across all financial service choices. They tend towards discrete, rational contracting to structure their behaviour regarding the financial services whenever possible.

4.3.3 No Purchase

In this quadrant, customers make no purchase, because their levels of involvement and confidence with the financial services are low. A significant amount of marketing activity is directed at these customers, in an attempt to increase their awareness of alternative products or services and convince them of their relative advantages.

4.3.4 Relational-Dependent

Customers, in this quadrant, have high levels of involvement; however they are not in control because of the complexity of the financial services or products and uncertainty of eventual outcome. Therefore, this reduces customers’ confidence. Customers will look for advice and help from banks or third parties in order to make choices. These customers are described as ‘dependent customers’ who make relationships to reduce uncertainty and structure their pattern of purchases.
4.4 TECHNOLOGY ACCEPTANCE MODEL (TAM)

While it is difficult to directly measure usage of Self-Service Technologies, because of its hidden and elusive benefits researchers have developed other measures, such as technology acceptance, which directly relates to Technology usage.

Based on the belief-attitude-intention-behaviour relationship, Davis (1986) introduced the TAM, which was an adaptation of the TRA. TAM, specifically, is designed for modeling user acceptance of information systems. Davis et al.(1989) state that ‘the goal of TAM is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified. They claim that the purpose of the TAM is to provide a basis for tracing the impact of external factors on internal beliefs, attitudes and intention. In Figure 4.3, the TAM hypothesizes that the acceptance of new technology is determined by intention to use that technology and the intention is jointly determined by the person’s attitude toward using that technology and perceived usefulness. The attitude, in turn, is determined by two specific beliefs perceived usefulness and perceived ease of use (Davis et al., 1989). Perceived usefulness is defined as ‘the prospective user’s subjective probability that using a specific application system will increase his or her job performance within an organizational context’ (Davis et al., 1989: p. 985), while perceived ease of use refers to ‘the degree to which the prospective user expects the target system to be free of effort’ (Davis et al., 1989, p. 985). Between these two, perceived ease of use has a direct effect on both perceived usefulness and technology usage (Adams et al., 1992; Davis, 1989)
Davis (1989) has also found that there is a relationship between users’ beliefs about a technology’s usefulness and the attitude and the intention to use the technology. However, perceived usefulness exhibits stronger and more consistent relationship with usage than the other variables reported in the literature. In addition, an individual may adopt a technology if he or she perceives it as convenient, useful and socially desirable even though they do not enjoy using the technology (Saga & Zmud, 1994). Thus, there might be a possibility of a direct relationship between beliefs and intentions. Subsequent research by Venkatesh (1996) refined the TAM suggesting that the mediating effect of attitude could be excluded as empirical evidence found that the attitude element did not fully mediate the effect of perceived usefulness on intention to use.

4.4.1 Attitude Construct in TAM

Attitude Construct in TAM postulated that behavioural intention was jointly determined by the person's attitude toward using the system and perceived usefulness (Davis et al., 1989). This means that the original theoretical conceptualization of TAM included the attitude construct. However, based on a longitudinal study, Davis et al.
(1989) later found that the power of the TAM remains equally good and is more parsimonious without having an attitude construct. There were three reasons to remove the attitude construct from the TAM. First, there was a strong direct link between perceived usefulness and intention in both, after one hour and fourteen weeks later, in their longitudinal study. Second, a weak direct link between perceived usefulness and attitude was found. Third, attitude was partially mediated by the impact of beliefs on intentions. Davis et al. (1989) claim that when the TAM is applied in settings where other factors, such as ease of use or usefulness are independently taken into account the attitude construct may not be a strong determinant of intentions. Jackson et al. (1997, p. 383) support this by stating that ‘Attitude, like many behavioural variables, may be necessary but not sufficient condition for success’. Therefore, there have been a number of researchers who have applied the TAM without the attitude construct, such as Venkatesh, 2000; Hong et al.,

Therefore this study aims to test the applicability of TAM in predicting intention to use internet banking and ATM among current users. We begin with the argument that the TAM model is more applicable in predicting intention to use (adoption) and usage for users than non users of a particular technological innovation. Here the researcher used actual TAM model along with the attitude to find the actual usage of ATM and Internet Banking among the users alone. 2002; Hwang, 2005; Chang, 2008; Gumussoy & Calisir, 2009 and the explanatory power of their models remained good.

4.5 SELF-SERVICE TECHNOLOGY

Self-services technologies (SSTs) enable customers to use technology to produce and consume services without direct personal contact with the representative from the firm, and the only human involved in the service delivery process is the consumer himself
Examples of available SSTs and applications include automated phone system (Telephone banking), Automated Teller Machine (ATM), Internet banking and Mobile Banking. For the banks’ ATM, aside from cash dispensing and balance checking, ATMs now have the ability to accept checks and deposits, fixed-deposit placement, share application and even top-up prepaid mobile accounts.

Table 4.1 shows the conceptualization of present day SST options in India. The information is based on a review of the Internet, trade magazines, newspapers and personal observations.

**Table 4.1 Categories and Examples of SSTs in Use**

<table>
<thead>
<tr>
<th>Interface Purpose</th>
<th>Telephone / Interactive Voice Response</th>
<th>Online/Internet</th>
<th>Interactive Kiosk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Services</td>
<td>• Telephone banking</td>
<td>• Internet Banking</td>
<td>• ATMs/BNA</td>
</tr>
<tr>
<td></td>
<td>• Mobile Banking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transactions</td>
<td>• Account Information</td>
<td>• Online purchase</td>
<td>• Passbook Entry</td>
</tr>
<tr>
<td></td>
<td>• Cheque status</td>
<td>• NEFT/RTGS/IMPS</td>
<td>• Mobile recharge</td>
</tr>
<tr>
<td></td>
<td>• Fund transfer</td>
<td></td>
<td>• Cardless transaction</td>
</tr>
<tr>
<td>Self-Help</td>
<td>• Mobile Applications</td>
<td>• Information bulletin regarding use of Internet Banking and other services</td>
<td>• Advertisement on various bank products</td>
</tr>
</tbody>
</table>

The advent of SSTs has certainly transformed the Indian financial industry landscape into an industry that is increasingly dependent on technology with a corresponding increase in customer participation in service delivery.
4.6 ELECTRONIC BANKING OR SELF-SERVICE BANKING TECHNOLOGIES (SSBT) IN INDIAN BANKING INDUSTRY

In the present study the terms ‘Self-Service Banking Technology’ and ‘Electronic Banking’ have been used interchangeably. Electronic banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. E-banking is the term that signifies and encompasses the entire sphere of technology initiatives that have taken place in the banking industry. E-banking is a generic term making use of electronic channels through telephone, mobile phones, internet etc. for delivery of banking services and products.

Electronic banking is an activity that is not new to banks or their customers. Banks having been providing their services to customers electronically for years through software programmes. These software programs allowed the user’s personal computer to dial up the bank directly. In the past however, banks have been very reluctant to provide their customers with banking via the Internet due to security concerns. Today, banks seem to be jumping on the bandwagon of Internet banking. Why is there a sudden increase of bank interests in the Internet? The first major reason is the improved security and encryption methods developed on the Internet. The second reason is that banks did not want to lose a potential market share to banks that were quick to offer their services on the Internet.

4.6.1 Evolution of E-banking

E-banking came into being in UK and USA in 1920s. It became prominently popular during 1960s through electronic funds transfers and credit cards. The concept of web-based banking came into existence in Europe and USA in the beginning of 1980s. It
has been estimated that around 40 percent of banking transaction would be done through Net.

4.6.2 E-Banking in India

In India e-banking is of fairly recent origin. The traditional model for banking has been through branch banking. Only in the early 1990s there has been the start of non-branch banking services. The good old manual systems on which Indian Banking depended upon for centuries seem to have no place today. The credit of launching internet banking in India goes to ICICI Bank. Citibank and HDFC Bank followed with internet banking services in 1999. Several initiatives have been taken by the Government of India as well as the Reserve Bank to facilitate the development of e-banking in India. The Government of India enacted the IT Act, 2000 with effect from October 17, 2000 which provided legal recognition to electronic transactions and other means of electronic commerce. The Reserve Bank is monitoring and reviewing the legal and other requirements of e-banking on a continuous basis to ensure that e-banking would develop on sound lines and e-banking related challenges would not pose a threat to financial stability. A high level Committee under chairmanship of Dr. K.C. Chakrabarty and members from IIT, IIM, IDRBT, Banks and the Reserve Bank prepared the “IT Vision Document- 2011-17”, for the Reserve Bank and banks which provides an indicative road map for enhanced usage of IT in the banking sector. To cope with the pressure of growing competition, Indian commercial banks have adopted several initiatives and e-banking is one of them. The competition has been especially tough for the public sector banks, as the newly established private sector and foreign banks are leaders in the adoption of e-banking.
Following are the electronic medium by which services are generally provided by the banks as a part of e-banking services.

- Payment Cards (Debits/Credit Card)
- ATM (Automatic Teller Machine)
- Phone Banking
- Internet Banking
- Mobile Banking
- Mobile Wallet

All the above mediums provide services, which can be, also known as “any time anywhere banking”. This facilitates the customer of the bank to operate their account from any corner of the world, without visiting local or any subsidiary branch of their banks. Efforts are made by the bank not only to provide the facility to the customer, but also to reduce the operational cost of the bank by providing e-banking services. So with this, banks have to employ less staff and still would be able to deliver service to the customer, round the corner.

4.6.3 Key Electronic Banking Services

For the purpose of extent of e-banking services, 49 services have been considered. These have been divided into five major categories, i.e., internet banking, phone banking, mobile banking, ATM and mobile wallet. Table 4.2 gives a brief description of these services.
Table 4.2 Key Electronic Banking Services

<table>
<thead>
<tr>
<th>Service code</th>
<th>Electronic banking services</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Balance enquiry and statement</td>
<td>Check out transaction in bank account with a real time balance.</td>
</tr>
<tr>
<td>2.</td>
<td>Transaction history</td>
<td>Check out past transaction from the date of account opening.</td>
</tr>
<tr>
<td>3.</td>
<td>Online transfer of funds</td>
<td>Transfer of funds to any bank account of that particular bank or any other bank.</td>
</tr>
<tr>
<td>4.</td>
<td>Card to card fund transfer</td>
<td>Transfer of funds having visa, debit card holders or credit card holders.</td>
</tr>
<tr>
<td>5.</td>
<td>Pre paid mobile recharge</td>
<td>Recharge pre-paid mobile online anywhere, anytime in a few minutes.</td>
</tr>
<tr>
<td>6.</td>
<td>Buy and sell Mutual Fund</td>
<td>Online buying and selling of mutual fund</td>
</tr>
<tr>
<td>7.</td>
<td>Open Fixed deposit and Recurring deposit</td>
<td>Apply online to fixed deposit and recurring deposit.</td>
</tr>
<tr>
<td>8.</td>
<td>Request of Cheque book</td>
<td>The cheque book is delivered on the address upon request.</td>
</tr>
<tr>
<td>9.</td>
<td>Stop Payment request</td>
<td>Issue instructions to stop payment of a particular cheque</td>
</tr>
<tr>
<td>10.</td>
<td>Monthly Bank account statement by E-mail</td>
<td>Free statement of bank account on e-mail address.</td>
</tr>
<tr>
<td>12.</td>
<td>Renewal/ premature closure of FD/ RD</td>
<td>Renew current FD account or request its premature closure</td>
</tr>
<tr>
<td>14.</td>
<td>Change Password</td>
<td>Change of log-in password and transaction password</td>
</tr>
<tr>
<td>15.</td>
<td>Demat holdings</td>
<td>Provide to demat account details and transactions.</td>
</tr>
<tr>
<td>16.</td>
<td>Loan Details</td>
<td>View details related to loan account like type of loan, date of sanction, date of maturity, rate of interest.</td>
</tr>
<tr>
<td>17.</td>
<td>Bills Payment</td>
<td>Paying of bills of utility (electricity and telephone), bank credit, mobile bills, and insurance premium.</td>
</tr>
<tr>
<td>18.</td>
<td>Online shopping</td>
<td>Pay e-shopping bills through internet banking.</td>
</tr>
<tr>
<td>19.</td>
<td>Ticket Booking</td>
<td>Booking of railway or air-ticket online</td>
</tr>
<tr>
<td>20.</td>
<td>Mobile Top-up</td>
<td>Recharge pre paid mobile anytime, anywhere by log in to internet banking</td>
</tr>
<tr>
<td>21.</td>
<td>Share Trading</td>
<td>Trade in security market online, through the unique three-in-one account that integrate banking, broking and demat account.</td>
</tr>
<tr>
<td>22.</td>
<td>Online tax payments</td>
<td>Online payment of service tax, income tax, central excise duty.</td>
</tr>
<tr>
<td>23.</td>
<td>Convert to EMI</td>
<td>Converting any transaction above Rs.2000 on a credit card into easy EMI. EMI repayments are easy and provide tenure ranging between 3 to 24 months</td>
</tr>
<tr>
<td>24.</td>
<td>Online loans</td>
<td>Get loans as fast as you click.</td>
</tr>
<tr>
<td>25.</td>
<td>Customer Correspondence</td>
<td>E-mail correspondence between customer and bank for transaction queries</td>
</tr>
<tr>
<td>26.</td>
<td>Demonstration of I-banking</td>
<td>Provide demonstration of internet banking services on banks website</td>
</tr>
<tr>
<td>27.</td>
<td>Corporate Internet Banking</td>
<td>Internet banking services to corporate customers</td>
</tr>
<tr>
<td></td>
<td>PHONE BANKING SERVICES</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>28</td>
<td>Enquire your Account balance</td>
<td>Get the details of savings, current and fixed deposit account balance.</td>
</tr>
<tr>
<td>29</td>
<td>Statement of Account</td>
<td>Get cheque book or latest account statement delivered at your door step.</td>
</tr>
<tr>
<td>30</td>
<td>Request for Fund Transfer</td>
<td>Transfer money from one account to another. Both accounts must be linked to customer ID.</td>
</tr>
<tr>
<td>31</td>
<td>Stop cheque payment Instructions</td>
<td>Stop payment of a single cheque or series of cheques, 24 hours a day.</td>
</tr>
<tr>
<td>32</td>
<td>Mobile Banking Registration</td>
<td>Get registration for mobile banking through phone banking</td>
</tr>
<tr>
<td>33</td>
<td>Latest Interest and Exchange Rates</td>
<td>Get latest interest rates on deposits and foreign exchange rates by talking to phone banker.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>MOBILE BANKING SERVICES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>Account Balance</td>
<td>Get information of updated balance without using internet or phone banking.</td>
</tr>
<tr>
<td>35</td>
<td>Making Payment</td>
<td>Make payment of all bills via mobile banking.</td>
</tr>
<tr>
<td>36</td>
<td>Details of credit card balance</td>
<td>Knowing the credit card balance without making a phone call or logging on the internet.</td>
</tr>
<tr>
<td>37</td>
<td>Loan Information</td>
<td>Mobile banking for loans availed for loan documents via mobile phone</td>
</tr>
<tr>
<td>38</td>
<td>I-Mobile</td>
<td>All internet banking transactions can be done on mobile phone</td>
</tr>
<tr>
<td>39</td>
<td>Mini statement</td>
<td>One can check the balance of last ten transactions.</td>
</tr>
<tr>
<td></td>
<td>ATMs</td>
<td>MOBILE WALLET SERVICES</td>
</tr>
<tr>
<td>---</td>
<td>------</td>
<td>------------------------</td>
</tr>
<tr>
<td>40.</td>
<td>24 hours access to Cash</td>
<td>Transfer fund between wallets</td>
</tr>
<tr>
<td>41.</td>
<td>Transfer fund between accounts</td>
<td>Transfer of funds from one account to another account in the same branch.</td>
</tr>
<tr>
<td>42.</td>
<td>View account balances and mini statement</td>
<td>Can view minimum last three transactions and current balance.</td>
</tr>
<tr>
<td>43.</td>
<td>Pin change option</td>
<td>Change the personal identification number of ATM/ debit card.</td>
</tr>
<tr>
<td>44.</td>
<td>Cash deposit</td>
<td>Can deposit money up to 50,000 in single access.</td>
</tr>
<tr>
<td>45.</td>
<td>Transfer fund between wallets</td>
<td>Transfer of funds from one wallet account to another wallet account or to bank account</td>
</tr>
<tr>
<td>46.</td>
<td>Making Payment</td>
<td>Make payment of all bills via mobile wallet.</td>
</tr>
<tr>
<td>47.</td>
<td>Online shopping</td>
<td>Pay e-shopping bills through wallet.</td>
</tr>
<tr>
<td>48.</td>
<td>Ticket Booking</td>
<td>Booking of railway, air-ticket and movie online.</td>
</tr>
<tr>
<td>49.</td>
<td>Mobile Top-up</td>
<td>Recharge pre paid mobile anytime, anywhere by log in to mobile wallet.</td>
</tr>
</tbody>
</table>

### 4.7 PRODUCTS OF E-BANKING SERVICES OR SELF-SERVICE TECHNOLOGIES (SST)

#### 4.7.1 Automated Teller Machine (ATM)

Automated Teller Machines or 24-hour Tellers are electronic terminals that let the customer bank almost anytime. Now it’s making peoples life very easy as they get their money whenever they need. So, they do not have to carry either big amount of money or the cheque book all the time. To get rid from this burden they need to deposit money in
the bank by opening an account and then the bank will give a Card i.e. an ATM card with a PIN number to them. By using that they can withdraw money from any ATM machine of that bank. When they insert the card in the machine and the PIN number the machine will show few instructions on the screen. By that time verification (PIN Number and Account Number) will be done with the main bank computer as they are connected. If the verification is correct then the user will choose an instruction and the ATM will dispense money to the card holder. Many automated Teller machines also allow people to deposit cash or cheques, transfer money between their bank accounts, mobile recharge, etc.,

Some of the advantages of automated teller machine to customers are:

- Allow the customers to withdraw cash at any time (24x7)
- ATMs offer the convenience of multiple locations
- Complete security as only the card holder knows the Personal Identification Number (PIN)
- No need to fill out withdrawal and deposit slips as it is required at the bank
- ATMs are faster than going to the bank

Hong kong and Shanghai Banking Corporation was the first bank to introduce the automated teller machines concept in India way back in 1987. New private sector banks have taken the lead in introducing automated teller machines initially in a big way to supplement their branch network and to compete with large public sector banks with many branches. ICICI, UTI, HDFC and IDBI together used to account for more than 50 percent of the total automated teller machines in India about four years ago. ICICI Bank was the first bank to cross the 1000 mark in India (Thamaraiselvan and Raja, 2007).

But the current scenario has entirely changed from with the banks in the public sector like State Bank of India and its associates. Canara Bank, Punjab national bank and Bank of
Baroda were aggressively pursuing the installation of automated teller machines across the country. It can be seen from the table 4.3 that the total number of automated teller machines installed by the banks was 185484 as on June 2015. In Tamilnadu, the total number of ATMs deployed by the banks was 18861 as on June 2015 (State wise deployment of ATMs for the quarter ended june 2015, RBI)

Table: 4.3 Total numbers of ATMs in India (As on June 2015)

<table>
<thead>
<tr>
<th>Bank Group</th>
<th>Metro Centers</th>
<th>Urban centers</th>
<th>Semi-urban centers</th>
<th>Rural Centers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nationalised Banks</td>
<td>17644</td>
<td>20823</td>
<td>19248</td>
<td>19373</td>
<td>77088</td>
</tr>
<tr>
<td>State Bank Group</td>
<td>11101</td>
<td>17716</td>
<td>18028</td>
<td>8315</td>
<td>55160</td>
</tr>
<tr>
<td>Private Sector Banks</td>
<td>21052</td>
<td>14870</td>
<td>11908</td>
<td>4327</td>
<td>52157</td>
</tr>
<tr>
<td>Foreign Banks</td>
<td>818</td>
<td>208</td>
<td>21</td>
<td>32</td>
<td>1079</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50615</strong></td>
<td><strong>53617</strong></td>
<td><strong>49205</strong></td>
<td><strong>32047</strong></td>
<td><strong>185484</strong></td>
</tr>
</tbody>
</table>

Source: Compiled from RBI Bank wise ATM Statistics, April 2015

Nationalised banks constitute the largest share of having installed automated teller machines, followed by the public sector banks, private sector banks and foreign banks. Public sector banks and private sector banks have more off-site automated teller machines, where as Nationalised banks have more on-site automated teller machines.

4.7.1.1 Types of ATMs

Automated Teller Machine (ATM) is broadly classified into three major types. They are bank ATMs, Brown label and White label ATMs (WLA). This can be clearly represented in the figure 4.3. All the operations involved in these types of ATMs are same but only the operators who are operating these ATMs are different.
White label ATM

White Label Automated Teller Machines or WLAs are owned and operated by non bank entities. From such White Label Automated Teller Machines customers from any bank will be able to withdraw money, but only limited transaction could be allowed. These White Label Automated Teller Machines cannot display logo of any particular bank and are likely to be located in nontraditional places. Tata Communications Payment Solutions Limited was the first company to get RBI’s permission to open White label ATMs. They started their chain under the brand name “Indicash”. Initially, RBI did not permit White label ATMs, and Banks wanted to reduce the operational cost, so they came up with Brown Label ATM (outsourcing) system. So in a way, the evolution is:
White label ATM (WLA) operators do not fall directly under banking regulations, but there needs to be a sponsor bank to load and manage cash in each WLA. While the RBI laid out three schemes for WLA operators, most players have opted for 'Scheme A' where each operator has to open at least 9,000 ATMs in three years. Under the scheme, for every WLA installed in tier I and II cities, they need to operate three in tier III, IV, V or VI towns. The RBI defines a tier III city as a location having population between 20,000 and 49,999, whereas a tier VI town has a population of less than 5,000. So far, a total of only 9,600 WLAs have been rolled out by seven operators since the launch of the scheme.

**Table 4.4 Difference between Brown label ATM and White Label ATM**

<table>
<thead>
<tr>
<th>Brown Label ATM</th>
<th>White Label ATM</th>
</tr>
</thead>
<tbody>
<tr>
<td>When banks outsourced the ATM operations to a third party.</td>
<td>When ATMs are owned and operated by non-bank entities but they are not doing ‘outsourcing-contract’ from a particular bank.</td>
</tr>
<tr>
<td>The private company owns &amp; operates the ATM machine, pays office rent. They negotiate with the landlord, electricity company, telecom company and so on.</td>
<td>Same as Brown Label ATM</td>
</tr>
<tr>
<td>The bank (which has outsourced this work) provides cash for that ATM.</td>
<td>Sponsor bank provides the cash.</td>
</tr>
</tbody>
</table>
ATM has logo of that bank (which has outsourced this work).

White label ATM doesn’t have such logo. Not even of the sponsor bank.

RBI not involved directly. These outsourcing companies have contractual obligation with their respective banks.

RBI is directly involved because these white label Companies have to separately get license/permission from RBI to run business.

No such compulsion.

They’ve to compulsorily open a few ATMs in (tier 3 to tier 6) areas. (like explained above)

4.7.1.2 Purpose for introduction of White Label Automated Teller Machines (WLAs) in India

In India only banks are allowed to set up automated teller machines. Between 2008 and 2011, there has been 30% growth in number of automated teller machines. Most of the ATMs concentrated their efforts in urban areas, that too only at prime locations e.g. near shopping malls and airports therefore financial inclusion not achieved.

In India ATM penetration has been very low when compared to other countries. This can be shown in the table 4.5

Table.4.5 Penetration of Automated Teller Machine

<table>
<thead>
<tr>
<th>Country</th>
<th>Approx. No. of ATMs per 10 lakh population</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>1400</td>
</tr>
<tr>
<td>UK</td>
<td>500</td>
</tr>
<tr>
<td>CHINA</td>
<td>200</td>
</tr>
<tr>
<td>INDIA</td>
<td>Less than 100</td>
</tr>
</tbody>
</table>
So the Reserve Bank of India feels that there is a need to expand the automated
teller machine network, which can be done only with the help of private operators. But
white label automated teller machines are very familiar in Canada.

4.7.1.3 Benefits from White Label Automated Teller Machines

The White Label Automated Teller Machines are likely to benefit customers as
well as banks. With the expansion of automated teller machine network, customers will
be able to withdraw funds at more locations which will be convenient and locked near
their home or place of work. Rural customers became the real beneficiary in this type of
channel. Banks too support the introduction of white label automated teller machines as
such machines are likely to reduce pre-transaction cost for them and will be free from the
problems related to maintaining and running such a delivery channel.

4.7.1.4 Problems faced by customers and White Label Automated Teller Machines
operators

The first and foremost concern for customers would be the inconvenience they
may feel in case of failed transactions on White Label Automated Teller Machines. In
such cases the dispute resolution mechanism will remove three entities – the White Label
Automated Teller Machines operator, the sponsor bank of the operator and the customer’s
bank. The second concern for customers would be the high cost they are likely to pay for
use of such automated teller machines. For a White Label ATM company biggest
challenges are office rent and security guard. Next if the company wants to make profit,
every White Label ATM needs to get at least 75-125 transactions per day, especially
when RBI requires them to setup 2/3rd of the ATMs in semi-urban and rural areas.
4.7.2 INTERNET BANKING

Internet banking is defined as the use of banking services through the computer network (the Internet), offering a wider range of potential benefits to financial institutions due to more accessibility and user friendly use of the technology (Aladwani, 2001; Yiu, Grant, & Edgar, 2007). Literature suggests many concepts to identify Internet banking, namely electronic banking, online banking, and e-banking. With Internet banking, customers can perform, electronically, a wide range of transactions, such as paying bills, transferring funds, printing statements, Schedule payment, cheque book request and inquiring about account balances through the bank’s website-banking solution. Furthermore, Internet banking has a significant impact on e-payments, offering a platform to support many e-commerce applications, such as online shopping, online auction, and Internet stock trading (Aladwani, 2001; Lee, 2009; Tan & Teo, 2000).

Internet banking comprises banking activities or services which can be availed by the customers at any point of time and from any places in their convenience, it is also called PC banking, online banking, cyber banking, virtual banking, etc. Internet banking delivers banking services through the open access computer network i.e. Internet, directly to customers’ home that can be used with different electronic devices such as personal computer, mobile phone with a browser or desktop software, digital television. So, we can say that Internet banking is about using banking facilities via the internet with the help of various electronic devices.

ICICI Bank initiated internet banking in India and later in the year 1999 HDFC Bank and Citibank followed the same. In today’s scenario, with the help of internet various banking and financial services are provided by banks in India.
Internet Banking offers different online services in India. According to a report published by RBI, there are three different levels of banking services offered through internet banking:

**The first level i.e. Basic level services**

It is basically about websites which disseminate information about different services and products offered by banks. It generally includes receiving and replying to customers’ queries through email.

**The next level i.e. Simple Transactional Websites**

It allow customers to submit their instructions and applications for different services, queries about their account balances, etc. but does not allow any fund-based transactions in their accounts.

**The third level i.e. fully Transactional Websites**

It allows customers to manage their accounts, facility of fund transfer, bills payment, ticket booking, avail facility of other banking products and services and trading in securities etc. The use of the internet by the customers for banking services has seen an upward movement during 2013-14 survey.

**4.7.2.1 Benefits of using Internet Banking**

Using Internet banking is beneficial for both i.e. Costumers and banks. The benefits of adopting internet banking are mentioned below: A. Benefits for costumers

**Less waiting time**

It offers less waiting time and more convenience as compared to the traditional banking system and significantly lowers the cost structure than traditional delivery channels. It also reduces the time and place limitation and it provides various benefits to consumers so that they feel convenient while doing banking activities.
Ease and Convenience

Internet banking is considered very efficient in terms of ease of use and access. It allows the consumers to make transactions on internet provide them comfort at home or office without going outside. It also enables consumers to keep an eye on their transactions or account activities from their home, office or elsewhere so that they can feel satisfied and convenient. Even non transactional facilities like ordering check books online, updating accounts, inquiring about interest rates of various financial products etc. have become much simpler on the internet.

24X7 Availability

With the help of internet banking, costumer can access their banking facilities and services all around the clock i.e. 24 hours and 365 days from anywhere at anytime. They don’t need to wait for timing of bank branches. But the transfer can be done only in the business hours and the transfer which is done after working hours could get accessed by next working day only.

Self service channel

Internet banking provides their customer a self service channel for various banking services without depending on the bank’s staff and other depending process to avail their services. Internet banking is one of the most popular self-service banking technologies. Continued use of self service technology is positively affected by buyers’ perceived usefulness.

Save time and money

Now customers don’t have to go to branch to avail banking services. It consists of various advantages such as: it will save time, save fuel, do away from traffic, save the environment in term of reducing the use of motor vehicles and reduce waiting time.
4.7.2.2 Benefits for banks

Increased Profitability

Adoption of internet helps the banks to increase their profitability. Banks with Internet banking have better operating efficiency ratios and profitability as compared to banks, which are not using internet facilities. The banks can provide banking services to the consumers using internet banking at a far lower cost as compared to the traditional banking.

Cost Effective mechanism

The internet banking provides an opportunity of self service channel to the consumers. This helps the banks to cut their workforce up to a particular extent that results in reducing the administrative costs borne by the banks. Compared to traditional banking system, internet banking is cost-effective as it reduces the administrative costs and paperwork needed for the bank transactions. Many studies show that electronic banking has successfully reduced operating and administrative cost and fees.

Reach where there is no branch: Internet banking has expanded their geographical reach and may increase customer base through deploying electronic delivery channels at lower cost. Actually, some banks are doing in that way that they are providing banking services exclusively via the Internet in some areas because they do not have bank branches in these areas. whereas many financial institutions are using the Internet banking as a branchless banking to satisfy their existing customers and attract new customers in the perspective of convenience and cost effectiveness.

Improve Customer relationship

Maintaining the relationship with consumers has become a strategic priority for most of the banks. Using the internet banking technology and facilities can provide a
means for banks to develop and maintain a good relationship with their customers by offering easy access to a wide range of products and services. Managing a good relationship with the customers may help to make customer loyalty, customer retention and improve cross-selling. Internet banking facilities have become a useful tool for improving customer satisfaction and increasing cross-selling opportunities.

Eco-friendly image

Another important benefit of internet banking is that it is eco-friendly in nature. Internet banking cuts down the paper usage and reduces pollution as people do not have to travel physically and also does not add carbon emissions. Implementing the e-banking facilities in the banks shows the concern of the bank towards good and healthy environment; this further will help the banks to create an eco-friendly image.

4.7.2.3 Challenges in internet banking

Security Risk

The problem related to the security has become one of the major concerns for banks. A large group of customers refuse to opt for e-banking facilities due to uncertainty and security concerns. So it’s a big challenge for marketers who have to convince their consumers regarding their security concerns, which may further increase the online banking use.

Privacy risk

The risk of disclosing private information & fear of identity theft is one of the major factors that inhibit the consumers while opting for internet banking services. Most of the consumers believe that using online banking services make them vulnerable to identity theft.
The Trust Factor

Trust is the biggest hurdle to online banking for most of the customers. Conventional banking is preferred by the customers because of lack of trust in the online security. They have a perception that online transaction is risky due to which frauds can take place. While using e-banking facilities a lot of questions arise in the mind of customers such as: Did transaction go through? Did I push the transfer button once or twice? Trust is one among the significant factors which influences the customers’ willingness to engage in a transaction with web merchants.

Customer Awareness

Awareness among consumers about the e-banking facilities and procedures is still at lower level in Indian scenario. Banks are not able to disseminate proper information about the use, benefits and facility of internet banking. Less awareness of new technologies and their benefits is one of the most ranked barriers in the development of e-banking.

4.7.2.4 Opportunities related to internet banking

Increasing Internet Users & Computer Literacy

To use internet banking it is very important or initial requirement that people should have knowledge about internet technology so that they can easily adopt the internet banking services. The fast increasing internet users in India can be a very big opportunity and banking industry should exploit this opportunity to attract more internet users to adopt internet banking services. Table no 4.6 shows evidence of increasing number of internet users in India. As per the last available data, as on 1 July 2015, there are 354,114,747 Indians who are using internet and it is approximately 30% more than the users of 2014. According to the ComScore Report, 2013 India is now world’s third
largest Internet users after U.S. and China. The computer literacy has gone upward in the last decade. Those with higher IT literacy may have a more positive perception towards e-banking in general and may thus, be more likely to accept e-banking services.

**Table 4.6 Users and non-users of Internet service**

<table>
<thead>
<tr>
<th>Year*</th>
<th>Internet Users</th>
<th>Penetration (% of population)</th>
<th>Non-users</th>
<th>1 Year User change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>354,114,747</td>
<td>27</td>
<td>956,935,780</td>
<td>51.9%</td>
</tr>
<tr>
<td>2014</td>
<td>233,152,478</td>
<td>18</td>
<td>1,062,139,065</td>
<td>20.7%</td>
</tr>
<tr>
<td>2013</td>
<td>193,204,330</td>
<td>15.1</td>
<td>1,086,294,544</td>
<td>21.5%</td>
</tr>
<tr>
<td>2012</td>
<td>158,960,346</td>
<td>12.6</td>
<td>1,104,629,293</td>
<td>26.5%</td>
</tr>
<tr>
<td>2011</td>
<td>125,617,813</td>
<td>10.1</td>
<td>1,121,828,198</td>
<td>36.1%</td>
</tr>
</tbody>
</table>

Source: Internet Live Stats (www.InternetLiveStats.com).

*As on July 1 of every year.

**Initiatives taken by government agencies for financial literacy**

Financial literacy and education play a crucial role in financial inclusion, and inclusive growth. A study reports that there is significant impact of financial literacy on use of internet banking. If customers are not financially educated they will simply avoid using new online services and not change their traditional way of banking, then banks will not be able to convert users into their new online banking strategies. Various government institutions like RBI, SEBI, IRDA and other market players have taken a number of initiatives on financial education. They have prepared a school curriculum along with various topics including internet banking, banking product and services, net banking to educate the school students, college students, working executives, middle income group, home makers, retired personnel, self help groups etc.
Competitive Advantage

The benefit of adopting e-banking provides a competitive advantage to the banks over other players. The implementation of e-banking is beneficial for bank in many ways as it reduces cost to banks, improves customer relation, increases the geographical reach of the bank, etc. The benefits of e-banking have become opportunities for the banks to manage their banking business in a better way.

4.7.3 TELEPHONE BANKING

Telephone banking refers to the use of a system to allow customers of a bank to process various banking procedures over the telephone. Such services can include anything from applying for loans and altering the terms of an existing account to ordering new cheques and monitoring the balance in an account. Since telephone banking can utilize an automated system, multiple customers can also be helped simultaneously. Simple questions regarding bank locations, branch hours, and even account balances can all be handled by such systems. This allows those operators or associates who are available to help fewer customers and focus on providing more thorough customer service, without taking time to answer simple questions that do not require human assistance.

Banking over a telephone system can often be more convenient than banking in person, since some functions can be accessed even when a bank is closed. Although much of today’s banking is carried out over the Internet there are still those among us who prefer to use the now rather old fashioned telephone banking facilities that banks and building societies still offer their clients. More often than not these services are offered as a way of backing up their Internet services in case of server error but they are also still used to great effect when it comes to applying for loans and overdrafts. Many would
argue that telephone banking is safer than Internet banking given the recent increase in Internet and Identity Fraud. A lot of us still like to talk to a human being rather than a machine and telephone banking provides us with that facility as well as giving us the opportunity to ask questions which may not be included or allowed for on a bank or building society’s website.

The ease of access for such services is one of the major advantages that telephone banking can provide for customers. Telephone services can be provided 24 hours a day, unlike most services provided at bank locations which are typically closed in the evenings, on weekends, and on many holidays. The big advantages of telephone banking are the ability to speak to another human being and discuss with them any issue that may not be mentioned or catered for on the website. In addition to that speaking to a call centre staff member allows for the provision of information such as any payments that are waiting to go into your account or go out. This information is not provided on their websites.

Automated phone systems are somewhat notorious for difficulty in use, especially older systems that may not recognize voices or other forms of input. Newer telephone banking systems have rectified many of these flaws, but the menus utilized by such systems may still be difficult to effectively navigate. The most common one would have to be the fact that not all banks and building societies offer 24 hour telephone banking. They may if it is simply a case of checking your balance or recent transactions but for anything more involved in that it can cause a problem. Also telephone banking is not active usually over bank holidays such as Christmas Day or New Years Day whereas Internet banking is available all year round.
There are also some potential security risks that arise through the use and development of telephone banking systems. Since customers are not actually presented face-to-face with a bank teller or manager, it may be easier for theft to occur and produce misrepresentation of customer needs over the telephone. This can be controlled through various security protocols incorporated into a phone banking system, but even these measures can be insufficient in some instances.

4.7.4 MOBILE BANKING

Mobile banking involves the use of mobile phones for banking transactions like fund transfer, balance check, etc. As per the extant guidelines of RBI, banks that are licensed, supervised and have a physical presence in India, are permitted to offer mobile banking services. Mobile Banking policies in India aim to enable funds transfer from an account in any bank to any other account in the same or any other bank (interoperability) on a real time basis irrespective of the mobile network the customer has subscribed to (TRAI, 2013). The Mobile phone plays a very important role in the development of mobile commerce and mobile banking.

The advancement in the operating systems of the mobile phones and mobile technology like 2G, 3G, and 4G has brought a significant change in the way of working of mobile banking service providers. Since the introduction of 2G and the subsequently 3G, the demands for mobile phones have increased many folds. This can be interpreted by a rapid increase in the number of mobile phone subscribers. According to the latest report of Telecom Authority of India (TRAI), India moved to the second place in mobile phone users next to China. Growth of mobile phone internet users is increasing year by year and this can be illustrated in the figure 4.6. According to the latest report from IAMAI, titled Mobile Internet in India 2016, the country is estimated to have 371 million mobile internet users by June 2016. India will attract 65 million new mobile internet users coming onboard during the
period of six months, ending June 2016. In 2015, the share of mobile internet spends in the average monthly bill rose to 64% from 54% in the previous year.

Figure 4.6 Growth of Mobile Internet Users in India 2012-2015

Source: IAMAI, Figures in Million users, *Estimated number

4.7.4.1 Platform for using Mobile Banking

In earlier days of usage mobile banking could be done using browsers in mobile phone but after the penetration of android operating system in mobile phones many banks have come up with the special application which performs banking services. These applications can get easily downloaded from the respective play stores at free of cost. Name of the mobile banking applications delivered by the Nationalised banks of India are listed in the table 4.7. It is evident from the table 4.7 that all the nationalised banks in India are providing the mobile banking services in the form of application and this is because of high penetration of smart phone among the customers.
<table>
<thead>
<tr>
<th>S. No</th>
<th>NAME OF THE BANK</th>
<th>MOBILE BANKING APP NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Canara bank</td>
<td>CANMOBILE</td>
</tr>
<tr>
<td>2.</td>
<td>Indian Overseas Bank</td>
<td>IOB</td>
</tr>
<tr>
<td>3.</td>
<td>Indian bank</td>
<td>IndPay</td>
</tr>
<tr>
<td>4.</td>
<td>Punjab national bank</td>
<td>PNB mBanking</td>
</tr>
<tr>
<td>5.</td>
<td>Syndicate Bank</td>
<td>SyndMobile</td>
</tr>
<tr>
<td>6.</td>
<td>Corporation Bank</td>
<td>CorpMobile</td>
</tr>
<tr>
<td>7.</td>
<td>Central Bank of India</td>
<td>Cent Mobile</td>
</tr>
<tr>
<td>8.</td>
<td>Bank of India</td>
<td>BoI Mobile Banking – BOI BTM</td>
</tr>
<tr>
<td>9.</td>
<td>United Bank of India</td>
<td>United bank of India</td>
</tr>
<tr>
<td>10.</td>
<td>Andhra bank</td>
<td>Andhra Bank</td>
</tr>
<tr>
<td>11.</td>
<td>Bank of Baroda</td>
<td>Bank of Baroda M-Connect</td>
</tr>
<tr>
<td>12.</td>
<td>UCO bank</td>
<td>UCO m-banking</td>
</tr>
<tr>
<td>13.</td>
<td>Vijaya Bank</td>
<td>Vijaya bank</td>
</tr>
<tr>
<td>14.</td>
<td>Union Bank of India</td>
<td>U-Mobile</td>
</tr>
<tr>
<td>15.</td>
<td>Oriental Bank of Commerce</td>
<td>Oriental Bank of Commerce mPAY</td>
</tr>
<tr>
<td>16.</td>
<td>Punjab and Sind bank</td>
<td>Punjab and Sind bank mPAY</td>
</tr>
<tr>
<td>17.</td>
<td>Allahabad Bank</td>
<td>Allahabad Bank</td>
</tr>
<tr>
<td>18.</td>
<td>Bank of Maharashtra</td>
<td>Maha Mobile</td>
</tr>
<tr>
<td>19.</td>
<td>Dena Bank</td>
<td>Dena MConnect</td>
</tr>
</tbody>
</table>

Source: Compiled from the bank websites
4.7.4.2 Transaction Limits in Mobile Banking

- Only Indian rupee transactions and these transactions are allowed within India only.
- Per day transaction cap of Rs.50000 has been removed by RBI, and every bank can change this cap depending upon their risk.
- Transaction without end-to-end encryption is Rs.5000/- (SMS Based).

4.7.4.3 Security and Authentication

- The highlights of security and authentication guidelines provided by the RBI on Mobile Banking:
  - The M PIN/T PIN or higher standard of mechanism should be used to authenticate the mobile banking customer in order to get login in and transfer.
  - End-to-end secure encryption mechanism should be followed in transactions.
  - The bank should conduct regular information security audits on the mobile banking systems to ensure complete security.

4.7.4.4 Advantages of Mobile banking

**Anytime banking**

Mobile banking gives you the privilege of anytime and anywhere banking. One can do most of the banking transactions after banking hours from anywhere, irrespective of whether you are travelling in bus or auto, whereas this ease will not be possible if you are connected to PC or laptop, especially when travelling.

**Free of cost**

The service provided by bank is free of charge unlike internet banking, there is no limit for number of times you can access your account.
Secure Banking

Some banks assure that, by downloading the app directly from the server, the data won’t be stored in your mobile as well as SIM card. The application comes with advanced encryption technologies making it safe and secure as Internet Banking.

4.7.4.5 Disadvantages of Mobile banking

- To make maximum benefit of mobile banking one should have smart phone. Some banks have specific software for specific mobile such as iphone, Android and Blackberry. People should download different applications based on the smart phone they own.
- Many experts believe that mobile banking is more secure than internet banking as very few virus or Trojans can exist in phone. However, that does not mean that they are immune to any kind of threats.
- There is a possibility of fake text message asking for bank account details from a hacker.
- There are also very limited anti-virus software options for mobile devices. People are less careful with their mobile compared to laptop. You must update your anti-virus on the mobile if you are a frequent user of mobile banking.

4.7.5 MOBILE WALLET

Mobile wallet is the digital equivalent to the physical wallet in which we carry money. It is an online platform which allows a user to keep money in it, just like a bank account. Mobile wallet is often confused with mobile banking, but is a much broader concept that includes using the mobile phone as a mode of payment. It is the digital equivalent to the physical wallet we already have in our pockets/bags today. Our mobile phones are with us at all times, and as we use them for payments to retailers, travelling on
public transport and a myriad other things, the need for physical cash diminishes. The main difference between a mobile wallet and online transactions via bank account is that, unlike banks mobile wallet does not charge any amount of money on every transactions and saves the customer from the hassle of entering card details and pin number for each and every transaction.

4.7.5.1 Kinds of Mobile Wallet

- Closed wallets (not re-loadable with cash and do not permit cash withdrawal, for instance, prepaid and gift vouchers)
- Semi closed wallets (re-loadable but do not allow cash withdrawal as they are not linked to a bank e.g. MobiKwik Wallet)
- Semi-open wallets (linked to a bank, but do not allow cash withdrawal e.g. m-pesa)
- Open wallets (re-loadable and linked with a bank, permit cash withdrawal at retailer outlets, agent outlets and ATMs, e.g. Paytm)

![Figure 4.7 Kinds of Mobile wallet](image)
In India Mobile wallet operators follow a semi-closed model, in which users load money in the wallets and make payments only to those merchants who have operational tie-ups with a mobile wallet service provider. However, deposits are below ₹ 10,000 as KYC (Know your customer) is mandatory for higher amounts. The average value of a transaction is ₹ 250-300.

**4.7.5.2 Banks and companies providing Mobile wallet service**

In the past year, large lenders like State Bank of India, Canara bank, HDFC, ICICI and Axis bank who control 40 percent of local banking assets have launched new payment instruments as they prevent customers from moving money to newly emerging non-bank companies. They are providing the wallet services in the following names:

- State Bank of India - e-buddy
- Canara Bank - Canara bank e-wallet
- HDFC - (PayZapp)
- ICICI - (Pockets)
- Axis Bank - (e-wallet Card)

From the above wallet service provider banks, it is easily found that there is only one nationalised bank which is offering Mobile wallet service to the customers that too in its preliminary stage.

**4.7.5.3 Non-banking Companies**

The major companies providing mobile wallet services in India are telecom service providers such as Vodafone Plc’s m-pesa, Bharti Airtel Ltd’s Airtel Money, Aircel’s Mobile Money and Tata Teleservices Ltd’s mRupee and payment services companies like Oxigen Services, Paytm and MobiKwik. They are able to create such wallets successfully and provide services that link technology, merchants and consumers.
4.7.5.4 Current status of Mobile wallets market

When compared to the banks, the non banking companies occupy the Mobile wallet market in India. This may be because of early adoption and Unwillingness of banks to provide such service to the customers. Paytm, a leading E-commerce company in less than 15 months of launch has achieved 50 million mobile wallet users with more than 16 million unique transacting wallets in a month and its plans to acquire 100 million mobile wallets by the end of 2015. Paytm has more users than total number of credit cards issued in India.

4.7.5.5 Benefits of Mobile Wallet

- Convenience and speed of doing the transaction
- Users enjoy greater flexibility in making secure payments.
- Users who don’t have a credit or a debit card can go to their nearest wallet recharge kiosk and get their wallets loaded with cash.
- It will become the obvious choice for payments in the rural areas and unbanked population as it is an easy method in managing cash.
- One touch payment to the mobile recharge and for e-commerce transaction.

4.8 CONCLUSION

A brief overview of consumer behaviour and its relation to the financial service industry, Self-Service Technologies (SSTs) with its origin and various services in modern era have been dealt with in this chapter. The various aspects of each Self-Service Banking Technologies such as Automated Teller Machine (ATM), Internet Banking, Telephone Banking, Mobile Banking and Mobile wallets have been discussed.
REFERENCES


