CHAPTER - I
The Indian financial setup is undergoing a period of substantial change, the impact of which is transformation in the way financial services are delivered. The changes, among others, include a significant increase in the number of alternative channels available for the delivery of services. The most recent delivery channel introduced for financial services is Internet or online banking which involves consumers using the Internet to access their account(s), to undertake banking transactions.

An existing bank with physical offices can establish a Web site and offer Internet banking to its customers as an addition to its traditional delivery channels or alternatively, a "virtual," "branchless," or "Internet-only" bank comes underway. Broadly the levels of banking services offered through Internet have been categorized in three types (Sathye, 1999):

(i) The Basic Level Services use the banks websites which disseminate information on different products and services offered to customers and members of public in general. It may receive and reply to customers queries through e-mail.

(ii) In the next level are Simple Transactional Websites which allow customers to submit their instructions, applications for different services, queries on their account balances, etc. but do not permit any fund-based transactions on their accounts.

(iii) The third level of Internet banking services are offered by Fully Transactional Websites which allow the customers to operate on their accounts for transfer of funds, payment of different bills, subscribing to other products of the bank and to transact purchase and sale of securities, etc.

We in India are still to have a "virtual" bank.

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India has already achieved a significant level of Internet penetration and usage as far as the banking is concerned. In the year 2000, about 200,000 Indians used the Internet for banking (Arunachalam, & Sivasubramanian, 2007). Although many banks offer I-banking services, most of them have no idea what makes their Internet offerings unique (Chung and Paynter, 2002). Not many attempts have surfaced in India to know as to why customers use internet banking vis-à-vis traditional brick and mortar banking. The increasing population of Internet customers and demand for payments via the Internet has an impact on banking services provided by many banks and force them to extend their banking services to customers on the Internet. Many new Internet-based banking services have been initiated and launched into the market and attract both old and new customers to continue their services with the banks.

**What is Internet Banking (IB)?**

The term electronic banking often refers to online banking/Internet banking. However, electronic banking is an upper construct including telephone banking, WAP-banking as well as iNet-television banking. In the present study, we use the term online banking parallel with Internet banking excluding other electronic delivery channels, because the Internet is widely seen as the most important delivery channel in the era. Numerous studies suggest that the Internet has become the most popular electronic delivery platform for electronic banking (see, for example, Karjaluoto et al, 2002).

Online banking (Internet banking) is a term used for performing transactions, payments etc. over the internet through a bank’s secure website. (www.en.wikipedia.org/wiki/Internet_banking). Well Fargo Bank (2000) defined internet banking as banking service that allows customers to access and perform financial transactions on their bank accounts from their computers with Internet connection to banks' web sites using Web browser software.

Standard Bank (2001) defined Internet banking is a remote home and/or office banking service that is offered to a bank’s personal customers, to perform routine banking transactions through the Internet. According to Bankrate.com (1998), Internet banking allows users to dial in and use the bank’s own software or that of an Internet service provider. This type of banking allows customers to access bank accounts from any location provided there is Internet access (Absa Bank, 2001). This provides customers with the ability to perform transactions via the bank’s website with the advantage of not being required to visit a physical branch or
ATM (Automated Teller Machine).

The services available for Internet banking vary from bank to bank. According to Bankrate.com (1998) virtually all banks that offer Internet banking services allow consumers to check the balances in their accounts, transfer funds and order electronic bill payments, with the even more sophisticated Internet banking systems allowing customers to apply for loans, trade stocks or mutual funds, and even view actual images of their cheques or deposit slips.

Business is being revolutionized every day as a result of the influence of the Internet. Organizations have become leaner, meaner, more profitable and more competitive. New businesses have sprung up on the Internet without a physical presence (i.e. virtual stores). Some existing organizations have moved from a bricks-and-mortar format to a clicks-and-mortar format, whilst others have adopted a more conservative approach and have both a physical and a virtual presence. Banks are no different in catching the Internet bug. There are virtual banks, such as Egg in Britain (Business Report, 2000), Security First Network Bank in America, and Enba in Europe (Goldfinger, 2001), which only exist on the Internet, and there are banks which have a physical presence but offer most of their services online.

Internet has thrown open issues which have ramifications beyond what a new delivery channel would normally envisage and, hence, has compelled regulators world over to take note of this emerging channel. Several studies have pointed to the fact that the cost of delivery of banking service through Internet is several times less than the traditional delivery methods. This alone is enough reason for banks to flock to Internet and to deliver more and more of their services through Internet and as soon as possible. Not adopting this new technology in time has the risk of banks getting edged out of competition. In such a scenario, the thrust of regulatory thinking has been to ensure that while the banks remain efficient and cost effective, they must be aware of the risks of technology failure and have proper built-in safeguards, machinery and systems to manage the emerging human and financial risks. It is not enough for banks to have systems in place, but the systems must be constantly upgraded to changing and well-tested technologies, which is a much bigger challenge.

INTERNET BANKING – A GLOBAL PERSPECTIVE

Internet Banking in the United States

The demand for on-line banking via the Internet has increased to 4.8 million customers in 1997 and to about 7.8 million customers in 1998. Most of the forecasts
for on-line banking predict that this growth rate will continue beyond the year 2000. By 2001, there were more than 14 million customers who used banking on-line service via the Internet (Stegman, 2005). Other financial service providers such as investment providers, mutual funds and brokerage houses also have offered on-line service via the Internet to their customers in the US and around the world.

**Internet Banking in the United Kingdom and Europe**

In the United Kingdom, Internet banking services are available and provided by twelve Internet banking services providers. The Egg, for example, is an Internet banking service provider (exclude current account features) that has more than 150,000 customers visited their web site during October 1998 to July 1999. The Internet banking services providers in the U.K. have encountered an increasing demand for cross boarder payment transactions for smaller amount of cash and payment over the Internet. Many banks continue to develop and launch new banking services on the Internet in order to satisfy and meet their Internet-based customer requirements in term of time, ease of use, security and privacy in the U.K. (Birch and Young, 1997; Mathew and Dagi, 1996; Gandy and Brierley, 1997).

In June 1999, the U.K. and eight other Western European countries: France, Spain, Portugal, Germany, Switzerland, Holland, Luxembourg, and Scandinavia have become leading nations in providing Internet banking services in Europe. Germany also has been rated as the nation that has the highest number of Internet banking services providers in Europe (BlueSky International Marketing, 1999). Although the UK has smaller number of Internet banking sites on the Internet than in Germany, it has been rated as the highest quality and functionality at no additional charges to their customers in Europe. However, there are two banks in the U.K. that charge additional fees for Internet banking services: (1) Natwest has a one-time charge of 30 pounds per customer, and (2) NPBS has 2.99 pounds per month after a free introductory period of six months.

In Scotland, the Bank of Scotland does not provide 24 hours Internet banking services via the web site. Customers can not access to Bank of Scotland web site between 1:00 a.m. and 5:00 a.m. during weekdays and between midnight and 5:00 a.m. during weekends. During the bank web site is not accessible, a daily back office operations and maintenance is performed to assure accuracy and security according to local restrictions, rules and regulations.

Most of customers in the U.K. and European countries use Internet banking services to inquiry about their outstanding balances in saving and checking accounts,
and details about their latest or last transactions for their daily reconciliation. The frequency to access the customers account per day is quite high. Many banks, therefore, have provided many view only features for customers to inquiry and view the information on their accounts as often as they want per day. As a result, the banks have reduced both operating costs and work hours for their staffs at call centers and local branches for frequently asked (FAQ) and repetitive transactions. The customers also benefit from quick, accurate, private, and time saving services and access from their convenient computer, time and places.

**Internet Banking in Asia and Pacific**

Internet banking in Asia and Pacific is new and gaining awareness in many countries such as China, Hong Kong, Singapore and India. In China, the Internet penetration into business and home had an impact on the development of on-line banking system of China. Many new e-businesses are emerging. The new electronic-based banking system focuses on the Internet and telephone based technologies to provide financial transaction services. It provides twenty-four hour access to customer bank accounts, transfer transaction between accounts, personal financial consulting, online stock trading, shopping, and utilities fee payments. "Speed, convenience and lower prices have become major factors that enable growth on online banking in China (Chinaonline, 2000)".

**Hong Kong**, it is among the first countries in Asia that provide electronic banking services via the Internet since 1990. However, on August 1, 2000, Hong Kong Bank (HSBC), launched its first Internet based retail banking services called 'onlinehsbc' to the public. It provides deposits, stock trading, bill payment and foreign exchange services for qualified customers at discounted transaction fees. HSBC also has decided to reduce online stock trading commissions from 0.5 to 0.25 for the Internet-based service in order to increase visiting rate and profit from 'onlinehsbc'. HSBC continued to extend the services to its major depositors until the end of 2000. By the first half of year 2001, HSBC delivered and started a Chinese language internet-based banking service to the customers. However, the bank's move toward Internet banking service does not result in closing existing local branches in Hong Kong (Hong Kong Bank, 2000).

**In Singapore**, Internet-based banking service has been implemented since 1997. For examples, Oversea Union Bank (OUB), DBS Bank, Citibank, Hong Kong's Bank of East Asia, Oversea-Chinese Banking Corp. (OCBC) offers E-banking service called 'finatiQ' to their customers in Singapore. The concept of 'finatiQ' is to
provide Internet-based banking services to customers at their convenience time from their personal computers and Internet connection via modems. Many new Internet-based banking service providers are emerging in Singapore and Hong Kong, therefore, the challenges for banks in Singapore are to grow and gain new market share in the new cyber market. Therefore, in Asia and Pacific, many banks, credit card companies such as VISA, and computer vendors such as IBM have formed alliance in order to develop Internet-based banking service standards for their customers. Example is the Interactive Financial Services (IFS) alliance founded in Singapore with alliance from banks in Singapore, Australia, Indonesia, Korea, Hong Kong, Taiwan and India. Through IBM global network standard, members are able to provide and exchange their electronic banking services to their alliance customers. In the future, the alliance intends to develop new services such as securities trading, smart cards, e-invoice and loan applications. It also plans to offer banking services through interactive television. The alliance also intends to develop standards and services that are compatible with those of the Integration Financial Network, an electronic financial consortium owned by eighteen major North America banks. This will eventually allow seamless, interactive banking and other e-business services across these banks and other ebusiness services around the world (Edmunds, 2000).

**Internet Banking In India**

Banks in India entered into Internet Banking service in 1995. However, many Indian banks have been striving to compete with foreign banks by providing better services to meet new Internet Banking service challenges. With high rate of NPL (Non Performing Loans) and economic crisis on-hand since 1997, many Indian banks are forced to reduce cost via reduction of human resources. Many experienced workers have retired with early retirement package offered by the bank. Remaining employees with less experience have more work to do and work faster within shorter service hours. As a result, customers have to wait longer in line and suffer from error prone transactions at the over the counter services in side the banks. The open and closing time of bank service hours also have been changed from between 8:30 a.m. and 4:00 p.m. (7 ½ hours) to 9:30 a.m. to 4:00 p.m. (6 ½ hours). Therefore, the Indian banks have decided to initiate, explore and attempt to launch Internet banking service as a mean to reduce waiting time, errors, and costs and improve customer satisfaction.

Their Internet banking services allow customers to access and inquire about their own accounts and perform simple transactions via the Internet from their
computers at work or home at time convenient to them. However, the feedback from customers in terms of satisfaction, complaints, and suggestions remain unknown and needed to be discovered in order to improve or disprove of Internet banking services. The Indian banks are in early stages of planning, developing and implementing their first Internet banking services to their customers.

Some of the more aggressive players in this area are ICICI Bank Ltd., HDFC Bank Ltd., UTI Bank Ltd., Citibank, Global Trust Bank Ltd. and Bank of Punjab Ltd. Of late, many public sector banks have also hooked on to internet. These banks provide services such as request for opening of accounts, requisition for cheque books, stop payment of cheques, viewing and printing statements of accounts, movement of funds between accounts within the same bank, querying on status of requests, instructions for opening of Letters of Credit and Bank Guarantees etc.

The race for market supremacy is compelling banks in India to adopt the latest technology on the Internet in a bid to capture new markets and customers. HDFC Bank Ltd. with its 'Freedom- the e-Age Saving Account' Service, Citibank with 'Suvidha' and ICICI Bank Ltd. with its 'Mobile Commerce' service have tied up with cell phone operators to offer Mobile Banking to their customers. It is estimated that by 2010, cellular phones will become the premier Internet access device, outselling personal computers. Mobile banking will further minimize the need to visit a bank branch.

Thus while there are evidences that suggest growing internet banking, the evidences that show growing concerns about internet banking are also not elusive. According to Weeldreyer (2002), Internet banking is not living up to the hype that surrounded it a few years ago. Customers' adoption rates are low, and their interest in Internet banking is waning. Weeldreyer goes on to say that in 2000 there were 60 Internet-only banks (in US context), however, that number has now dwindled to about 20. It is evident that the picture presented by Moody (2002) and Goldfinger (2001) has not materialized in reality. A major problem is that banks are forgetting the traditional rules of business, such as listening to customers and delivering the satisfaction that they are willing to pay for. Weeldreyer (2002) advises that the banks need to know who they are serving, what their needs and problems are, and what their financial priorities are. The mistake that online merchants and now online banks are making is redesigning the organization strategy to become an electronic strategy, rather than developing a strong organization strategy which incorporates an electronic strategy.
According to Goldfinger (2001), security was seen as a major obstacle to Internet banking. Banks were concerned about unauthorized access to their systems, and customers were concerned about the safety of their personal data and the risk of fraudulent transactions. Further, it is alarming to note that only a third of Internet customers are satisfied with the service they are receiving. Data from research studies suggests deficient one of the core functions of the Internet, i.e. customer service.

Hence the objective of this research was crafted to quantify the factors affecting the adoption of Internet banking by Indian consumers. Such a research will help banks to formulate appropriate strategies to ensure rapid migration of customers to online banking. Determining who banked online, how often they banked online, why they banked online, and what online services they used, determining the satisfaction of the banking customers using internet service based on issues such as security, site user-friendliness, online help and incentives to bank online forms the scope of this research.

The contrasting viewpoints presented above beg the question - why would banks have an Internet presence? What prevents customers from banking online?

The position of banks is only tenable so long as they are not superseded by more cost effective or efficient delivery systems, and provided they meet the locational needs of their customers. With the widespread use and adoption of the Internet, there exists the possibility for financial institutions and “new entrants” to provide their products and services over the Internet. Therefore it is pertinent to explore the advantages that would accrue to banks in utilising the Internet for the delivery of products, services and other uses.

The rationale for banks using the Internet

The properties of the Internet make it an ideal medium for delivery of banking products and services. The advantages accruing to a bank can be outlined as follows:

Cost savings. Internet delivery is cheaper than physical channels. A simple transaction cost for a non-cash payment at a branch is likely to cost the bank as much as 11 times more than over the Internet. As with all forecasts and estimates related to the Internet, different authors provide disparate accounts of the magnitude of savings. This estimate is based on studies by Downes and Mui (1998), Wylie (1999) and The Economist (1999). The cost savings come about through the combined effects of reduction and better utilisation of the workforce, equipment, more economic usage of space and operational savings.

Increased customer base. One of the primary objectives of developing new products and services is to attract new consumers and to retain existing customers
Present Internet demographics suggest that customers are relatively well off and the well educated that use the Internet, which suggests that potential users are high net worth customers. Banks unable to respond to requests for new services risk losing customers to competitors. The use of multiple distribution channels can increase effective market coverage by enabling different products to be targeted at different demographic segments. Additionally, customers are likely to place their trust in proven innovators. Therefore it is important to build a reputation for innovation. This may make it easier to sell financial services, attract more customers, and retain existing customers.

Enable mass customisation. Internet delivery has the capability to customise information to suit the needs and the likes of each user (Dannesnberg and Kellner, 1998). Mass Customisation refers to the notion that each individual user perceives that the service they receive is personalised or customised to their needs and uses. Such features are becoming more and more important in a world saturated with mass automation and homogenised products and services.

Marketing and communication. The World Wide Web has the capability to host advertisements and other marketing campaigns without facing incremental charges for prolonged exposure like those found in the traditional media (Quelch and Klein, 1996). Once a Web page is designed and hosted on a server it serves its purpose 24 hours a day as long as it is active on the server. Costs are limited to initial development costs and maintenance costs that are less in comparison to traditional media. Additionally, the interactive nature of the Internet facilitates a system whereby a customer can be guided through a catalogue of products and services that is most suited for them depending on their socio-economic profile. It is cheaper than traditional mailshots and far more effective since it is customised. Further, the Internet can be used very effectively to collect customer data with minimum effort. Achieving more operational usage from customer databases is also made easier.

Enable innovation. Internet technologies have paved the way for a multitude of different banking products to be innovated (Prescott and Van Slyke, 1997; Mandeville, 1998). It also facilitates the delivery of products and services in an innovative manner to customers.

Development of non-core business. Recent changes in the regulatory framework have enabled many banks to expand their services into non-traditional banking areas (Marshall, 1998). For instance, many banks have already moved into, or are in the process of moving into, insurance and stock brokerage. Many banks have the physical and computing infrastructure in place to develop with these products and services and an Internet site can serve as an ideal shop front for these services.

ADOPTION OF INTERNET BANKING BY THE CUSTOMERS

The emergence of the Internet has had a significant impact on the diffusion of electronic banking. With the help of the Internet, banking is no longer bound to time or geography. Consumers all over the world have relatively easy access to their accounts 24 hours per day, seven days a week. Therefore, Internet banking provides many benefits not only to banks but to the customers as well. Though the
forecasts concerning the growth of the Internet community have mostly been very enthusiastic, yet the acceptance of this new technology has not been equal in all parts of the world.

Although recently more studies have covered the Asian and newly industrialized countries (Balachandran et al., 2000; Suganthi et al., 2001; Gerrard and Cunningham, 2003; Rotchanakitumnual and Speece, 2003; Luarn and Lin, 2004), much of electronic banking research remains in the diffusion and adoption of online banking amongst Western and developed world banks, corporate customers (Daniel, 1998, 1999; Bradley and Stewart, 2003; Sarel and Marmorstein, 2003a, b) and high street customers (Lewis, 1991; Holmund and Kock, 1996; Jun and Cai, 2001; Aladwani, 2001; Barczak et al., 1997; Sathy, 1999; Beckett et al., 2002; Howcroft et al., 2002; Karjaluoto et al., 2002; Kapoulas et al., 2002; Sarel and Marmorstein, 2003a, b; Kolodinsky et al., 2004).

Accordingly, if the customers view IB positively, they are more likely to adopt it otherwise; they will exert resistance and prefer not using it.

Traditionally, the adoption continuum recognizes five categories of consumers that differ in terms of adoption rate: (1) innovators who are the first adopters, interested in technology itself with positive technology attitudes; (2) early adopters who are also interested in technology and are willing to take risks; (3) early majority who can be considered pragmatists and process oriented; (4) late majority who are more or less skeptical about technology with negative technology attitudes; and (5) laggards who have extremely negative technology attitudes and therefore never adopt technology among the mainstream (e.g. Moore, 1991; Rogers, 1995). As the Internet banking adoption research has concentrated more or less on studying innovators and early adopters of the new technology, there is a limited amount of research available of customers’ attitude and perceptions about Internet banking.

According to Gibson, Ivancevich and Donnelly (2000) an attitude is a positive or negative feeling or mental state of readiness, learned and organized through experience, that exerts specific influence on a person’s response to people, objects and situations.

The primary objective of this study is thus to determine these attitudinal factors that influence on the formation of attitude towards Internet banking, on the one hand, and their relation to the use of online banking services, the other. This study also looks at individual differences in online banking in an effort to better understand the adoption of internet banking. While this study focuses on attitude
development in particular, it also investigates individual differences in demographics and perceptions. Thus, The Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980) and the Technology Acceptance Model (TAM) (Davis et al., 1989) provide the theoretical foundation for the study. While the TRA explains consumer behaviour on the basis of attitudes and reference group influence, the TAM posits that perceived usefulness and perceived ease of use determine a person's behaviour.

**Other concerns of Adoption of Internet banking**

The adoption of the internet banking in India has been quite slow. Not many of the banks except a few in private sectors were providing internet banking service till 1997. Public sector banks were altogether averse to the idea of using internet banking. Banks are now slowly appearing on the Internet to provide retail and corporate banking services.

In particular, no published study, regarding perceptions of bank customers in India about Internet banking, could be found by the researcher. The present study is intended to fill this important gap.

Confronted with the similar problem, many explanations have been offered for the slow growth of Internet banking in other countries which are applicable in this country as well. Some contend that security concerns among banks and customers are keeping both away from Internet banking, while others cite lack of knowledge about availability of such a service, the Internet banking site being not user friendly and lack of access to computers/Internet as the reasons (O’Connell, 1996).

Karjaluoto et al. (2002) showed that prior experience with computers and technologies and attitudes towards computers influence both attitudes towards online banking and actual behaviors. Their study revealed among these factors, prior computer experience had a significant impact on online banking usage while positive personal banking experience seemed to have had an effect on both attitudes and usage and satisfied customers tent to keep up with their current delivery channel.

Research showed attitudes towards electronic banking and actual behaviors were also influenced by factors such as satisfaction/dissatisfaction with current banking services, reference groups, i.e. influence from families and others and computer attitudes these would strongly affect attitudes and behaviors towards online banking.

In the past, Lewis (1991) pointed out that the reasons consumers switched delivery channel from traditional to electronic self-service was the dissatisfaction with
their present services. These might include the slow speed of service in branches, inconvenient branch opening hours or places and the small number of branch staff available to serve customers, etc. While a number of recent studies focussing on customer satisfaction with bank services, indicate that early adopters and heavy users of internet banking were more satisfied with this service compared to other customers (Polatoglu and Ekin, 2001).

The delivery of technology services appears to be correlated with high satisfaction where these services were most important to customers (Joseph and Stone, 2003). Similarly, the literature suggests that consumers prefer a mix of rather than any one single delivery channel (Howcroft et al., 2002) and that it would be highly important for service providers to understand and improve each channel within the overall service offering rather than concentrating efforts on improving one delivery channel in isolation in banking (Patricio et al., 2003).

Karjaluoto et al. (2002) showed that reference groups have equally affected attitudes and behaviors towards online banking. Measuring attitudes with the Fishbein model, they also suggested that the overall strongly positive attitudes towards online banking are faster, cheaper, easier and more service-oriented.

Finally, a number of studies also found trust and perceived risks have a significant positive influence on commitment (Bhattacherjee, 2002; Mukherjee and Nath, 2003). Bhattacherjee (2002) theoretically conceptualised and empirically validated a scale to measure individual trust in online firms. The author found that one's willingness to transact with an online firm may be predicted by additional variables above, and beyond trust, such as perceived usefulness and perceived ease of use of such transactions.

Likewise, one's trust in an online firm may not be derived only from prior familiarity with the firm, but also from calculative, institutional and identification and beliefs about the firm. This is consistent with Howcroft et al.'s (2002) study, claiming that the most important factor in encouraging the use of online banking is lower fees and improved levels of service, i.e. an error-free service. They also found among the reasons for consumers to be reluctant to use online banking services were concerns over security, lack of awareness of online services offered by banks and complex bank sites. While, Mukherjee and Nath (2003) tested a model of trust in India in which "shared value", "communication" and "opportunistic behavior" were antecedents of trust. They concluded that both shared value and communication played a significant positive role on trust and that trust had a significant positive
influence on commitment.

CUSTOMER SERVICE AND INTERNET BANKING

Despite such awesome growth and position and internet’s all pervading presence in the society, the Indian Banking System remains to be much maligned and to a large extent misunderstood. Majority of its customers have mixed feelings towards the internet and therefore, have mixed reactions. They mostly border towards dissatisfaction and disappointment for failed expectations. They have their moments of satisfaction too, but they are far between and momentary in nature. Despite the presence of highly educated and also well trained people manning the bank branches, why customer perception of bank services is very low? If one scans through the articles published in the journals in the last five years, hardly anybody has expressed positive perceptions on the part of customers towards the banking internet services. The Indian banking industry has been criticized for its growing indifference towards customer concerns. The question, therefore, is one of examining whether customer service in the banking industry has been really deteriorating and why with the usage of internet as a tool of data transfer?

India steadily advances into the next millennium of globalization, and the country’s financial markets are on the brink of an era of change. In the past five years, Indian banks have had to cope with the impact of deregulation, increased foreign competition and an unprecedented growth in the use of a new technology - information technology (IT). The goal of increased IT usage, it is widely believed, will lead to the creation of a wide range of new banking products and new delivery systems among other things. The key to preserving one's market share and leadership in the industry undeniably is going to be information technology.

With corporate sector aspiring to globalist, modernization of financial services will bring vast changes in banking strategy which in turn would call for evolving a customer-centered organization structure. This study reveals the introduction, growth and development of Web-based customer service and support in banks. The researcher believes that the successful banks will ultimately be those able to understand the needs of their customers. These banks will need to utilize emerging information technologies and service methodologies to meet customer requirements, gain correspondingly stronger customer relationships. In addition, the banks will personalize their service, make it easy and convenient to access and use, and price it competitively in relation to more traditional forms of support (Herman, 1981).
This research thus basically dwells over the gaps that exist between the customer expectations of Internet-based banking services and the actual delivery of customer service by Indian banking institutions. Banks have a definite role to play, in not only identifying customers' aspirations and expectations, but also, in tailoring their services accordingly. Theodore Levitt once commented: "the purpose of a business is to create and keep a customer". This is more applicable in a service industry like banking, considering that it is becoming competitive and customers are more discerning as well as demanding.

It is quite difficult to define customer service in precise words (especially in the context of e-banking), because it is person specific and represent only a point of view related to one. An inclusive definition can outline its broad sense. Customer service comprises of many aspects which provide satisfaction to the customers. Aspects of customer service include (Steve, 1976):

(a) technical perfection of product;
(b) speedy and prompt execution of the service;
(c) seller's behavior and attitude; and
(d) after-sale service

Details of these aspects with regard to customer service, provided by banks will bring out clearly various facets of customer service.

**Technical Perfection:** In case of customer services in banks, arithmetical accuracy of transactions is covered under technical perfection. This implies that customers feel satisfied when they find their accounts accurate. This research study too has dealt with this question along with other related questions.

**Speedy and Prompt Execution of Services:** It shows the efficiency of the employees. Customers expect efficient handling of their transactions. Efficiency can be measured on the basis of one criterion i.e. the reasonableness of time taken in providing various services.

**Employees' Behavior and Attitude:** Attitude of the person rendering service also has an important place in customer service. In case of banks, the behavior of staff becomes an important determinant of the customer's feelings and opinion. Under buyers' market, information and advisory aspect do play an important role. Every customer is not aware of the banking services and their relative utility. Banks will have to bring in new products and use latest technology. Customers look to their bankers for advice on the financial and other related issues confronting them too.

**After-sale Service:** Customer service really begins with the execution of sale
because the use of the product or service will indicate the satisfaction of the customers. In case of banks also, after sale service has an important role. This is so because banks, in selling a service, essentially, sell a promise of future performance. In a nutshell, customer service implies providing services to the customers with utmost satisfaction of the customers.

Currently, there are a number of issues hampering the acceptance of Internet-based money management service. These include customer satisfaction with existing service channels, security concerns, and a perceived lack of utility in the Internet channel (Metcalfe, 2001). For newcomers to the Internet, issues such as security and privacy concerns are still the greatest barriers to entry (Procter, 2001). Banking organizations have a big role to play in helping to make their customers feel safe on the Internet.

Another issue facing Internet banking customers is that they perceive the Internet channel to lack functionality. Financial service providers appear to have, so far, failed to communicate a clear value proposition to customers. Most consumers reported that they do not use Internet-based financial services nor expect to use them in the near future. Financial institutions thus face a challenge in demonstrating that using the Internet as a service channel will be worthwhile and functionality will be delivered.

The greatest challenge for banking institutions will be to move beyond traditional ideas of banking by redefining; streamlining and integrating their core business service focus to suit customers needs (Souza, 2001). They need to reinvent themselves by critically examining their existing infrastructures and focusing on the key areas that directly benefit their customers. This strategy requires the banks to replace their traditional product and channel silos with a customer-centric approach, entailing enormous changes in corporate culture and operational procedures for most institutions (Hamilton, 2001).

Perhaps the most critical challenge is to get customer service right, not just on the Internet, but across all communication channels. Customer service is currently considered the Achilles heel of most Indian banks.

A second challenge is to find the right balance between "bricks and clicks" by moving cautiously in reducing the size of physical branch networks (Deloitte Consulting, 2000). Retaining the existing physical infrastructure prevents immediate cost-savings but remains the greatest point of difference between traditional and virtual banks. This is of particular relevance in India which struggles with relatively
Another challenge for customer service is that of channel integration. Traditional banking institutions are still struggling to integrate customer data across all the points of contact customers have with them. Even where this is achieved, they must ensure consistency in the functionality across banking channels. If the strategy is that the Internet could become the main communication channel in the banking context, this requires that a core Internet service offers comprehensive transaction, financial management and advice functionality. This functionality should become the backbone of their channel management and can then be extended with other channels playing a supporting and complementary role (Hamilton, 2001). Unfortunately, this strategy requires an IT architecture which is often not possible given the banks' proprietary and legacy systems. The latter often limits the Internet service functionality. This creates a vicious circle whereby the Internet value proposition is too small to move customers online, and limits the financial viability of the Internet channel. This in turn discourages the bank from investing sufficient funds to further develop the channel.

Another challenge faced by banks is the new type of Internet customers, the youth, and their very different demands and expectations. These early adopters have internalized the Internet technology, are highly active, autonomous and willing to experiment. On the other hand, they expect low fees and have no respect for the traditional distinction between banks and technology brands such as IBM and Microsoft whom they are equally willing to trust with their money. This market is important because they constitute the next generation of banking customers and, once lost, may be extremely difficult to win back. However, banks cannot focus their Internet channels entirely on this market without alienating their more techno-phobic mainstream customers who tolerate less risk and require better guidance (Souza, 2001).

Finally, a major challenge is that new entrants in the Internet banking arena, such as retailers, investment companies and brokers, are seeing banking as a tool to retain and acquire customers for their core business rather than as an independent profit centre. In addition, they often have a far more streamlined technical and business process infrastructure. As a result, they are likely to market and price their banking products aggressively and can offer extremely competitive rates.
Measurement of Customer Service

Customer service in the internet banking sector, cannot be so easily measured with the help of a couple of indicators. Of course, there can be a few indicators like the number of complaints received, but by and large, most of the important facets of customer service remain out of reach of global indicators because the facts are not amenable to easy direct measurement. As a result of this, assessment of the quality of customer service in internet banking is left mainly to the sub-active judgment of the concerned decision makers. There are, thus so many opinions and as many analyses of the pitfalls as the number of reasons making them.

In the absence of any factual and systematically collected information and how a typical customer is served, every one of them acquires an authority to have an opinion and express it confidently giving some supporting stray incidence. Consequently, there are conflicting opinions and no precise identification of shortfalls, if any. The understanding of this complex area is obviously biased by the nature of complaints persistently lodged (and magnified) by some vociferous customers without realizing that the problem of these few may not be a generic problem. The whole area of customer service in e-banking thus gets largely deformed; it gets linked with only customer complaints and concentrates on the complaints of the complaining customers.

A majority of customers perhaps opt for enduring the problems they face and unwillingly start accepting the situation as unchangeable reality. Their silence is complacently interpreted as no change required. But, their dissatisfaction certainly creates hindrances in transforming class banking into mass banking. There is thus no alternative to making systematic efforts to find out from the customers themselves, the status of customer service from internet banking in great details, that is about (i) the various services offered by the internet bank, (ii) the various types of branches rendering these services, (iii) the various types of customers, (iv) the different facets of service such as speed and accuracy and so on. The resultant information should provide an authentic account of the state of affairs and should be immensely useful in identifying precisely the pockets in customer service warranting improvement.

Quality of Internet Banking Service

According to American Society of Quality Control, quality is defined as a "conformance to requirement" or "fitness for customer use". Quality can be defined as the totally of features and characteristics of a product or service that bear upon
its ability to satisfy stated or implied needs.

To survive in the highly competitive Internet banking industry, it is apparent that the banks need to provide customers with high quality services (Mefford, 1993). In so doing, bankers are first required to understand the attributes customers use to judge service quality. Then, steps need to be taken to monitor and enhance the service performance. There have been numerous studies identifying the key service quality dimensions in the traditional banking environment, where personal interaction between customers and bank employees is a primary service delivery and communication channel. However, relatively little literature has investigated service quality attributes in the Internet banking industry, where non-human interaction via the Internet is a main service delivery and communication channel.

**IT based Internet banking and quality**

To remain competitive, banking institutions are increasingly offering their customers information technology (IT)-based service options. Service providers are using IT to reduce costs and create value-added services for their customers. Some examples of IT-based service enhancements include Web-based banking systems provided by banks and automatic ticketing machines by airlines. These service systems are expected to help service providers improve service quality, financial performance, customer satisfaction, and productivity. Furey (1991) suggests that IT can help enhance service quality by increasing convenience, providing extra services, and collecting service performance information for management use. Fitzsimmons and Fitzsimmons (1997) suggest several competitive roles of IT in services such as the creation of entry barriers, enhancement of productivity, and increase of revenue generation from new services. In many service industries, IT-based service systems are essential for a service provider to remain competitive (Bonfield, 1996).

Because of the importance of IT in service industries, we need to understand better how service customers evaluate IT-based services and how their evaluations affect their perceptions of the overall service quality of the service provider and of their own satisfaction. Since customers are the end-users of IT-based services in banking and it is their perception of service quality that matters most, banking institutions must understand which attributes customers look for when consuming Internet services, which factors affect customers' intentions to use internet banking services, and how internet banking services affect customers' perceptions of internet
banking service quality. A thorough understanding of these issues would be of substantial benefit to managers.

The study therefore, investigated the relationship between internet banking services and customers' perceptions of service quality. The central research questions include:

What are the critical attributes that customers expect when using internet banking service systems?

What are the key variables that affect customers' evaluations of internet banking services?

How will customers' evaluations of internet banking services affect their perceptions of overall internet banking service quality?

To address these questions, a causal model of service quality is proposed, which centers on causal linkages among some key variables along with customers' perceptions of internet banking services and service quality. An internet banking service construct is proposed and linked to service quality as measured by SERVQUAL (Parasuraman et al, 1988,1991). Several key variables affecting customers' views of IT-based services are identified based on the literature and incorporated into the model. The hypothesized model is then tested based on data collected from a sample of bank customers.

Unfortunately, although Internet banks have focused their attention on improving their banking service quality, many of them still seem to be lagging behind their customers' ever increasing demands and expectations. Rose (2000) evaluated the service quality of 23 US Internet banks, including 12 Web-only banks, in terms of seven service categories:

1. opening an account;
2. deposits and withdrawals;
3. rates and fees;
4. navigation and ease of use;
5. bill paying;
6. security; and
7. customer service.

She found that most of the sampled banks showed an unsatisfactory level of service quality and argued that: ... online banking today is often a maddening, frustrating affair that can cause as many problems as it solves (Rose, 2000).
The current study aims to provide insights into service quality in the context of emerging Internet banking. The specific objectives of this study are four-fold:

1. What do customers perceive to be the key dimensions of Internet banking service quality?
2. Which quality dimensions are most significantly associated with customers' satisfaction and/or dissatisfaction?
3. Are there any substantial discrepancies, in terms of satisfying and dissatisfying factors, between customers of the Internet-only banks and those of traditional banks offering Internet banking services?
4. What can be recommended to improve the customers' perceived Internet banking service quality and, in turn, their satisfaction?

Automated Service Quality and the Mediating Role of Customer Satisfaction

The role of technology in service organisations as discussed by Kelley (1989) has been predominantly employed to reduce costs and eliminate uncertainties. In the service sector, technology has been used to standardise services by reducing the employee/customer interface (Quinn, 1996). The majority of consumers now more than ever prefer to opt for a technology-based banking service delivery over that of the employee (Voice + The European Magazine for Applications of Computer Telephony, 1997). This emerging trend raises some important issues about the impact that technology will have on automated service quality and customer satisfaction levels. To what extent can the employee/customer interface be removed from the front line banking and still maintain or improve the levels of customer satisfaction? Dabholkar (1996) suggested that little is known about consumer preference for self-service options, particularly those that are technological based. Furthermore Cowels and Crosby (1990) have researched tolerance levels of consumers' preferences for using technology instead of the human touch.

Neither the effects of service quality on bank profitability nor the mediating role of customer satisfaction in an automated banking context have received significant attention in the service marketing area. Yet, in the general literature, service quality and customer satisfaction have often been identified as significant predictors of business performance (Duncan and Elliott, 2002; Wiele et al., 2002; Yasin et al., 2004; Yeung et al., 2002). Therefore, this study explores how perceived quality of automated service and level of customer satisfaction are related.

It is proposed that customer perceptions and preferences of service quality have a significant impact on a bank's success. Analysing markets based on customer

2 'Automated service quality' is defined as the customer's overall evaluation of the services provided through electronic channels, such as the internet, telephone and ATMs (Santos, 2003).
perceptions, designing a service delivery system that meets customer needs, and enhancing levels of service performance are pertinent objectives for banks to gain and retain a competitive advantage (Brown and Swarts, 1989).

Service quality in the broader context has received much attention because of its obvious relationship with costs, financial performance, customer satisfaction, and customer retention.

The literature provides an extensive account of the relationships between service quality, customer satisfaction, and financial performance where face-to-face interaction between customer and employee is the only focus. Recently, however, technology has had a remarkable influence on the growth of service delivery options (Dabholkar and Bagozzi, 2002) and a profound effect on service marketing (Bitner et al., 2000). There are several competitive advantages associated with the adoption of technology in service organisations, including the creation of entry barriers, enhancement of productivity, and increased revenue generation from new services (Fitzsimmons and Fitzsimmons, 1997). Service quality is one of the main factors that determines the success or failure of electronic commerce (Santos, 2003). However, automated service quality has tended to lag behind because practitioners have focused mainly on issues of usability and measurement of use (Buckley, 2003), with little consideration for the outcomes.

The rapid development of IT-based technology options advances the need for research beyond the interpersonal dynamic of service encounters in this technology-oriented context (Meuter et al., 2000). Parasuraman and Grewal (2000) emphasized the importance of technology in shaping buyer-seller interactions and recommended further investigation into the impact of technology, for example, on the service quality-value-loyalty chain. The quality issues of automated services in the banking context are becoming important because of their potential influence on: attractiveness, customer retention, profitability, positive word-of-mouth, and maximum competitive advantages (Moutinho and Smith, 2000; Nguyen and Leblanc, 1998; Santos, 2003).

Despite the theoretical background underpinning the importance of automated service quality in customer satisfaction and profitability, empirical research is required to examine the extent to which it enhances or diminishes these variables in this new context. Accordingly, the efforts here were made to find out the relationship between customer perceptions of automated bank services and their profitability via customer satisfaction.
Internet banking (IB) is very attractive to banks and to consumers who now have higher acceptance of new technology and increasingly understand more complex products. Banks also use their strong brand name, large customer bases, and high market share of certain financial products to keep existing customers and win new ones (Hagel and Hewlin, 1997). In the same vein, under intense competition, a number of leading private banks have been implementing programs and systems to provide better quality services (Yavas et al, 1997) and innovative products (including offering multi-channel banking services) to their customers, in order to increase efficiency and customer satisfaction. Keeping in line with online banking services abroad, a number of leading banks have offered full-service online banking since 1997 and several more are expected to come online.

Building on an earlier study of customer satisfaction (Polatoglu and Ekin, 1999), this study seeks further to develop understanding of IB through an investigation of the factors that influence customers' acceptance of IB services. Specifically, a survey of IB customers was conducted to explore the actions that they were likely to take, and investigate their satisfaction level regarding the use of IB services. The demographic characteristics of the customers were explored and interviews were conducted with the bank's vice president who was in charge of alternative channels in order to identify the bank's strategies and future outlook of IB.

CUSTOMER SATISFACTION & INTERNET BANKING

In an era of mature and intense competitive pressures, many firms are focusing their efforts on maintaining a loyal customer base especially after resorting to internet banking when the personal contact finished. In response, many retail banks are directing their strategies towards increasing customer satisfaction and loyalty through improved service quality. The question is: what are the major determinants of customer satisfaction especially in internet banking?

The existing evidence suggests that major gains in customer satisfaction are likely to come from improvements in service quality; service features; and customer complaint handling. Not surprisingly, there are strong linkages between service quality dimensions (already discussed) and overall customer satisfaction (Anderson and Sullivan, 1993), there has been considerable debate as to the basic dimensions of service quality (see Brown et al., 1993 and Cronin and Taylor, 1992, for reviews), the measurement of these dimensions (Brown et al., 1993; Parasuraman et al., 1993; Smith, 1995; Teas, 1993), and the components of customer satisfaction (Hausknecht, 1990; Yi, 1990).
Satisfaction depends upon the customers' own perceptions, aspirations and expectations. The law of customer satisfaction is expressed by the formula:

\[
\text{SATISFACTION} = \text{PERCEPTION} - \text{EXPECTATION}
\]

If a customer expects a certain level of service and perceives the service rendered is higher, he will be a satisfied customer. On the contrary, if he perceives the same level of service as before, but expects a higher level, he will be disappointed and, therefore a dissatisfied customer.

Customer Satisfaction is thus defined as the gratification of a need or desire in one who consumes goods or services. It can also be explained as the difference in expectations versus what the customer actually receives in a product. This definition is known as the disconfirmation of expectations model. "If perceived performance exceeds a consumer's expectations (a positive disconfirmation), then the consumer is satisfied. But if perceived performance falls short of his or her expectations (a negative disconfirmation), then the consumer is dissatisfied." MacKenzie, Olshavsky and Spreng (1966) feel that desires play an important role in customer satisfaction, and are often ignored with this definition of customer satisfaction. Not considering desires has led to wrong conclusions about customer satisfaction such as; a consumer who expects and receives poor performance will be satisfied. The gap between the expectations about the services of the customers and their fulfillment on the part of the banks is the root cause of grievances which affects the business as well as image of the banking.

The customer satisfaction is also dependent on customer profile, their socio-economic and demographic background, their psycho graphic make-up, motivation behind their savings, awareness of and attitude to various modes of savings, and reasons for their preference for one form of saving over another. Broadly speaking, customers are of great variety with different expectations and attitudes and come from a wide socio-economic and cultural backgrounds. Since the number of customers to whom services are to be delivered has increased considerably, we should understand and analyze our customers' needs in totality, examine our existing infrastructure and attitudes to respond to their needs (Kazim 1997).

Along with quality and price, convenience will be an important factor for many products and service survival. As the use of the Internet for at-home transactions and service method continues to increase, banks will need to continue to search for
innovative ways to market and distribute their products for the convenience of the consumer. Many banks will find that they will need to begin to sell their products and service online as well, or they will begin to lose the customers who prefer the convenience of shopping without the need to leave home. Services will need to differentiate from that of the competitors in some way in order to convince new customers to try your services.

**Customer complaining behaviour in technology-based service encounters and satisfaction**

In recent years, a growing number of technology-based services, such as Internet banking services, self-service machines and touch-phone services, have emerged. Thus, customers are increasingly interacting with self-service technologies (SSTs), technological interfaces that enable customers to produce a service independent of direct service employee involvement (Meuter et al., 2000). The emergence of SSTs has spurred a plethora of predictions of how technology will affect interactions between customers and service providers. One such prediction is that technology will facilitate customer complaints by offering new channels that reduce the time and effort required in the process (Brown, 1997; Shaffer, 1999; Tax and Brown, 1998). As barriers to complaints are lowered, the complaining frequency is expected to increase. Moreover, it is argued that the use of technological support to handle complaints will lead to more efficient service recovery systems (Brown, 1997; Tax and Brown, 1998). Few empirical studies, however, have explored how technology affect complaining behaviour, and if complaining rates are actually higher in technology-based services. Likewise, there is little empirical evidence on how technology alters firms’ response frequency. Here we address these questions by comparing complaining behaviour in dissatisfactory traditional with technology-based service encounters.

**TRUST & INTERNET BANKING**

Trust is a highly complex and multi-dimensional phenomenon (Lewis and Weigert, 1985; Butler, 1991; Barber, 1983). Its importance to interpersonal and commercial relationships is evidenced by the plethora of research efforts within various disciplines such as social psychology (Deutsch, 1960; Lindskold, 1978; Lewicki and Bunker, 1995), sociology (Lewis and Weigert, 1985; Strub and Priest, 1976), economics (Dasgupta, 1988; Williamson, 1991) and marketing (Anderson and Weitz, 1989; Dwyer et al., 1987; Ganesan, 1994; Moorman et al., 1992; 1993). A
large stream of literature has emphasized the role of trust as being central to the success of customer relationship building, in all contexts of relational exchanges (Achrol, 1991; Becker, 1960; Dwyer et al., 1987; Morgan and Hunt, 1994).

Trust has been defined in various ways in the literature. According to Morgan and Hunt (1994), trust exists "when one party has confidence in an exchange partner’s reliability and integrity." Mayer et al. (1995) defined trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party." Simply put, trust is the willingness of an individual to behave in a manner that assumes another party will behave in accordance with expectations in a risky situation (Deutsch, 1960).

In the context of Internet banking, trust is the customer’s willingness to rely confidently on the exchange partner and the partner’s actions in terms of the partner’s on-line environment. This definition draws on Rotter’s (1967) classic view that trust is a “generalized expectancy held by an individual that the word of another ... can be relied on.”

Trust, according to Spekman (1988), is so important to relational exchange that it is “the cornerstone of the strategic partnership” between the bank and its Internet customers. Trust is a vital antecedent for purchasing online (Morrison and Firmstone, 2000; Urban et al., 2000; McCole and Palmer, 2001), and is a vital ingredient for relationship marketing in general (Morgan and Hunt, 1994). But the question of trust may be even more important in the virtual world than it is in the real world. This is because the parties in an Internet transaction need not be in the same physical location, eliminating the possibility of using factors such as handshakes and body language to gauge and to build trust (Clarke, 1997).

Research approaches to trust can be categorized based on how trust is viewed. According to Bhattacharya et al. (1998), researchers in different disciplines have viewed trust along different dimensions. Personality psychologists tend to view trust as an individual characteristic while social psychologists tend to view trust from the standpoint of behavioral expectations of others involved in transactions. Economists and sociologists tend to focus on how institutions are established and incentives are used to reduce uncertainty associated with transactions among relative strangers.

In addition to the above-mentioned approaches, a large body of work in marketing has examined the issue of trust, where they have focused on two major
areas: (1) the role of trust in the relationship between dyadic partners involved in transactions (e.g., Smith and Barclay 1997) and (2) culture and its influence on the development of trust (e.g., Doney et al. 1998). Roseau et al. (1998) argue that it is necessary to integrate the differing views of trust across disciplines and put forth that trust may be a “meso” concept, which integrates both the individual and institutional level views of trust development.

Trust has been given special attention from different scientific disciplines, such as Anthropology (e.g. Aguilar, 1984); Economics (e.g. Williamson, 1993); Sociology (e.g. Gambetta, 2000); Games Theory (e.g. Milgrom and Roberts, 1992); or marketing (e.g. Morgan and Hunt, 1994; Anderson and Narus, 1990; Doney and Cannon, 1997; Ganesan, 1994). This interest arises from the capacity, which the existing trust has to develop successful and long-term relationships. More exactly, trust facilitates the adoption of decisions, in risky situations (Deutsch, 1962; Mayer et al., 1995); and reduces the number of possible alternatives (Kumar et al., 1995). Reduce the environmental complexity (Luhmann, 1979; Barber, 1983); facilitates cooperation and coordination (Putnam, 1995; Misztal, 1996); improves conflict resolution (Hakansson and Sharma, 1996); reduces the need for control mechanisms (Achrol, 1997); and helps to develop commercial exchanges in the long term (Koehn, 1996).

Marketing is one of the knowledge areas, which has analyzed in depth the characteristics of the trust concept and its incidence on commercial relationships. Most of the research developed from the marketing perspective is associated with inter-organizational relationships “Industrial Marketing” and Relationship Marketing theories (e.g. Morgan and Hunt, 1994; Anderson and Weitz, 1989). According to these works, trust is a key component in the perceived quality of a relationship (Dwyer et al., 1987). Trust plays a decisive role in the continuity and development of the relationships between a company and the different agents, which constitute its environment (Morgan and Hunt, 1994; Crosby et al., 1990).

Despite the importance of trust in Internet banking (Quelch and Klein, 1996), few theory-guided empirical research studies have been undertaken to understand the nature of trust, its antecedents, and its consequences in the context of Internet banking. Although the importance of trust in Internet banking is an emerging area of interest in management research, extant literature on Internet banking is scarce, and that which does exist focuses on general issues (Mukherjee and Nath, 2003). Most research papers lend qualitative insights, exploring Internet banking as a
phenomenon and logical process rather than as a model with a set of determinable inputs and outputs. These papers ignore many potentially important constructs suggested by the rich but distant literature on trust (Tan and Teo, 2000; Liao et al., 1999; Daniel, 1999). Thus, the conceptualization of a more comprehensive model of trust and its antecedents in the context of Internet banking is useful.

**DELIVERY CHANNEL AND BANKING**

The quality of service is measured by the use the eight dimensions of website quality by Garvin (1987), namely, performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. This dimension quality model (Exhibit 1.1) was used to measure the services quality of each bank by presence of each element on its website/portal.

Because the customers interact with banks or their accounts using internet as the channel through the bank’s website/portal, the overlooking of the quality considerations of website/portal shall be detrimental for the researchers or for the strategists. It is assumed that better the quality of website/portal; it is more likely to have favourable attitude of customers towards internet banking and hence digestable the adoption.
<table>
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<tr>
<th>Exhibit 1.1 The Eight Dimensions of Website/Portal Quality</th>
<th>Source: Garvin 1987</th>
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<tbody>
<tr>
<td><strong>Perceived Quality</strong></td>
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<tr>
<td><strong>Performance</strong></td>
<td>Basis of honesty in reliability</td>
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<tr>
<td><strong>Features</strong></td>
<td>Tutorials</td>
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<tr>
<td><strong>Reliability</strong></td>
<td>Help functions</td>
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<tr>
<td><strong>Conformance</strong></td>
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<td><strong>Usability</strong></td>
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<td><strong>Serviceability</strong></td>
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<td><strong>Aesthetics</strong></td>
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<tr>
<td><strong>Search function</strong></td>
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<tr>
<td><strong>Navigation Menu</strong></td>
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<tr>
<td><strong>On-line help</strong></td>
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<td><strong>Communication</strong></td>
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<td><strong>Security</strong></td>
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<td><strong>Services</strong></td>
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<td><strong>Font</strong></td>
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<td><strong>Picture size</strong></td>
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<td><strong>Layout</strong></td>
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<td><strong>Colour theme</strong></td>
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</tbody>
</table>

- Bank Information
- Up to date information
- Transfer between bank
- Development details
- Basis of honesty
- Basis of reliability
- Other Language
- Data Safety
- Encryption
- Encourages requirements
- 24 hours - 7 days
- Ease of use
- Product Information
- Limit to change data
- Correct link
- How informative
- Explains symbols
- Clear instructions
- Connections
- System
- Responiveness
Portals are the so-called hybrid or integrative business models that do not solely follow any of the four net business models of content, context, communication and commerce, but integrate these "4 Cs of the internet" into a comprehensive business model (Afuah and Tucci, 2001; Bauer and Hammerschmidt, 2002). Portals can be characterized as integral problem solvers following an augmented service concept (Gounaris and Dimitriadis, 2003; Payne and Holt, 2001). In contrast to the so-called "pure play web sites" or "simple web sites", respectively, which are specialized in one of the four C-business models and emerge, for example, as information-only sites or transaction-only sites, portals can be described as "extensive web sites" (Huizingh, 2002).

Accordingly, several authors describe portals as innovative self-service technologies that offer a single point of access to services, an almost unlimited content as well as applications and excellent retrieval facilities that enable "one-stop shopping" (Gounaris and Dimitriadis, 2003; Jun and Cai, 2001; van Riel et al., 2001). In the context of e-banking portals, this means that all stages of the financial transaction cycle (information provision, initiation, negotiation, execution/settlement, after sales support) can be processed electronically. This is achieved by replacing personal interaction and physical facilities with technological solutions. As a consequence, customers are able to carry out different financial transactions at one site including paying their bills, viewing their bank statements, and purchasing stocks and other financial products (e.g. insurance). Thus, e-banking portals transfer the "all in one" principle from the old economy - where it is implemented through brick-and-mortar branches - to the internet (Bauer and Hammerschmidt, 2002; Jun and Cai, 2001).

In addition to the above-mentioned integration principle, there is a second portal characteristic often associated with the idea of one-stop banking, namely the inclusion of services from third parties (aggregation). This concept requires portal providers to invest into strategic alliances in order to increase transaction efficiency and benefits for customers through a broader range of offerings. Increasing the number of available alternatives at one single site can significantly reduce opportunity costs as well as costs of inconvenience due to virtual store hopping (Bergen et al., 1996; Srinivasan et al., 2002).

The third characteristic that transforms a conventional web site into a portal can be seen in the ability to personalize the above-mentioned portal services and functions, which means that the user can arrange the 4 Cs individually according to
his or her own needs. Hence, personalization enables the user to create a “personal virtual bank” and in turn increases the user's perceived control of portal processes and elements as well as the freedom of choice (Hoffman and Novak, 1996). Most notably, the customer can narrow down the number of alternatives and is therefore, able to reduce the time and costs of finding appropriate offers.

Summarily, portal sites capture distinctive user segments by providing a broad range of customized facilitating and supporting services that add value to the core products. Thus, portals offer many advantages as compared to simple web sites and are by this means expected to positively affect satisfaction and loyalty of e-customers. Ideally, these advantages result in the fact that a portal is not only the first stop on the web surfer’s journey but also the only source a web surfer needs. Considering the portal’s all-in-one solution, the user no longer faces transaction costs (e.g. fees, time, risk and stress) that would result from the search for several specialized sites. The fact that users do not have to leave the portal site offers a high convenience benefit.

The rationale for mustifying the banks portal(s) in this study is thus justified while considering the adoption of internet banking service.

In the next chapter, review of literature has been presented besides the various models fitting into effort and hypotheses developed.