

Chapter - 02

Literature Review

2.1 Introduction

In this chapter variety of literature relevant to the effectiveness of e-banking (dependent variable) and the contributory factors such as customer attitude towards e-banking, scope of e-banking applications, level of service quality of e-banking, security of e-banking, profitability of e-banking, considering e-banking as a strategic tool, level of customer relationship, and operational efficiency of e-banking (independent variables) have been identified and explored. The study on these factors has contributed towards deriving the research model for this study.

The support for establishing the relationship between the dependent and independent variables has been looked for through the literature survey.

This research attempts to provide the banking sector with information and analysis of the factors affecting effectiveness of e-banking. This study will also be useful to all e-banking users and non-users. The literature survey has contributed towards all these.

2.2 E-banking

Electronic banking, also known as cyberbanking, virtual banking, home banking, Internet banking and online banking, includes various banking activities conducted from home, business or on the road, instead of at a physical bank location. Electronic banking has capabilities ranging from paying bills to securing a loan electronically.

Electronic banking saves time and money for users. For banks, it offers an inexpensive alternative to branch banking and a chance to enlist remote customers. Many banks are beginning to use home banking, and some use electronic commerce as a major competitive strategy (Turban-2005).

2.3 Effectiveness of E-banking

“Effectiveness is the degree to which the organisation achieves a stated goal. It means that the organisation succeeds in accomplishing what it tries to do. Organisational effectiveness means providing a product or service that customers value” (Daft – 2000).

“Effectiveness criteria measure the outcomes achieved by anything. A particular operation may be effective in some respects and ineffective in others” (Hellriegel, et al-2002).

Effectiveness means “degree to which an activity or initiative is successful in achieving a specified goal or degree to which activities of a unit achieve the unit's mission or goal” (www.balancedscorecard.org). In considering above definitions, for this research study we redefined the definition in the following way:

“Effectiveness of e-banking means degree to which an e-banking application or e-banking activities are successful in achieving its specified goals”.

According to a research conducted by Olga Luštsik (2003) in the field of e-banking, the researcher has brought out the benefits of implementing e-banking in three perspectives namely: banks, customer and economy. The level of effectiveness of e-banking applications can be investigated in the light of customer's perspective as well as bank's perspective, because, bank and customer are extremely important elements in e-banking.

2.4 Factors Contributing for Effectiveness of E-banking – Customer's Perspective

2.4.1 Attitude Towards E-banking

Positive attitudes and previous experiences with technology and computers are identified as common traits of most users with regard to the proper characteristics of individuals currently using online banking services (Black, et.al-2001; Karjaluoto et.al-2002a, 2002b). In order to identify the proper characteristics of e-banking adopters these authors

have applied Rogers' (1995) "Diffusion of Innovations Model". Accordingly they suggest that online banking services should be compatible with customers' personal values. However they found out, that previous experience with banking services and the approval of reference groups (e.g., relatives or friends) contribute positively to the use of online banking services. Apart from these Sathye (1999) has identified security-related concerns, and lack of knowledge about the existence and potential benefits provided by e-banking among non-users of e-banking services influence the adoption of e-banking services. Further barriers for Internet banking adoption include: price concerns (e.g., Internet access costs and bank commissions), lack of easy access to computers and the Internet, change avoidance, and problems derived from the use of the new online distribution channel.

The concept of attitude has been used so often in consumer studies that it can be considered as a key element in most consumer models. One of the most popular and traditional definitions of attitude is "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object" (Fishbein and Ajzen - 1975).

In general, above definition requires a more specific approach to define attitude towards e-banking. In this way, we would like to point out that, in keeping with both the spirit of Fishbein and Ajzen's definition and above mentioned other attitude definitions, whose specific objective was more related with the Internet, we redefined customers attitude towards e-banking means all learned past experience and predisposition to respond in a consistently favourable or unfavourable manner with respect to e-banking. Therefore their same academic trend has been followed in this study. However, Igarria and Chakrabarti (1990) relate attitude with "affective reactions of individuals toward [...] the use of computers in general".

Moreover, Whitley (1997) developed a meta-analysis in which numerous computer attitude studies were compared. One of his main conclusions was that the applied

dimension for computer attitude was mainly the affective; i.e. emotional responses towards the use of computers.

Heikki Karjaluoto (2000) in his research on “The Future of Banking”, attempts to examine bank customers' delivery channel preferences as well as attitudes towards e-banking in the changing banking sector where he pointed out certain few words like customer service and loyal customers are nowadays often refers to a relic of antiquity. His study addresses several research questions inquiring perceptions of, beliefs about and attitudes towards, as well as intentions to Internet banking.

The factors influence the formation of attitudes towards electronic banking on the one hand and their relation to actual behavior on the other. Thereby, the primary question here was as follows: How are attitudes towards electronic banking formed and how are they related to the use of Internet banking? This question relates to the causal type of research because it deals with the relationship between different constructs. Furthermore, sub questions had to be designed inquiring, for instance, the basic beliefs consumers held about Internet banking, their weight and importance as well as comparisons of consumer perceptions of traditional branch banking and electronic delivery.

From the above discussed literature in connection with attitude towards e-banking we concluded that the trust, customer acceptance, promotional activities of banks in promoting e-banking, encouragement provided by the bank for the customers to use e-banking and the relationship of consumers with the phenomenon of e-banking applications are some of the key indicators in forming the attitude towards e-banking in Sri Lanka. In this sense, based on those previous ideas from the literature on the e-banking already cited, in principle knowledge regarding consumer's attitudes towards the e-banking is essential for investigation on the effectiveness of e-banking applications in Sri Lanka.

2.4.1.1 Trust

Trust is the psychological status of involved parties who will pursue further interactions to achieve a planned goal. A trading party makes itself vulnerable to the other party's

behaviour. In the market space, sellers and buyers do not meet face to face. The buyer can see a picture of the product but not the product itself. Promises of quality and delivery can be easily made-but will they be kept? To deal with these issues it is necessary to have a high degree of trust between buyers and sellers. Trust is important in global electronic commerce due to the difficulties of taking legal actions in case of a fraud and the different cultures and business environment involved (Turban-2005).

In the e-banking also, having a high degree of trust between bank and customer is an important aspect in implementing e-banking activities effectively.

2.4.1.2 Customer Acceptance

According to Turban (2005) customers' acceptance, user-friendly web interface, security and control of the e-commerce system, level of trust and promotion are most important critical success factors of e-commerce.

A study released in 2000 by the office of the currency can provide a valuable insight into the impact of e-banking on an institution's bottom line. This study reveals that virtually 100% of the financial institutions over \$10 billion in assets offer e-banking. And smaller institutions are not far behind. Between the 2nd quarter of '98 and the 3rd quarter of '99, e-banking grew by 226.9% for institutions with less than \$100 million in assets and 258.1% for institutions between \$100 million and \$1 billion in asset size. Clearly mid-sized institutions were instituting online banking services at a rapid pace in response to the increased consumer acceptance of the Internet (Michele Petry-2001).

Question: How would you measure the effectiveness of e-banking? *Answer:* I would analyze the effectiveness through customer acceptance and the cost saving the bank then sees. It is also a retention tool, but that is not an attribute that is quantifiable (Andy Zavoina -2004).

2.4.1.3 Promotional Activities of E-banking by Banks

Promoting e-banking and establishing on-line and real time branches and offering electronic products and services such as debit card, credit card, telephone banking services, ATM's services, call center services, electronic queuing system, and customer-bank communication system was considered to be another successful strategy of the bank in adopting e-banking approach (Tehran Iran-2004). To promote the customers involvement in e-banking, promotion about e-banking is an important factor.

2.4.2 Scope of E-banking Applications

2.4.2.1 Comprehensiveness of E-banking Applications/ Range of E-banking Services

E-banking was developed a few years back. Parsons (1996) assumed that, in adopting the internet, firms go through three main stages (range of e-banking services):

The first phase, information presentation which involves the initiative to launch a basic on-line presence, mainly in order to present information to the customers. Information presentation may involve one way communication (such as informing customers about products and services), or two-way communication (involving some degree of interaction, since by allowing users to send electronic mails to the firm in order to make enquiries, suggestion or complaints). In this stage, the overall purpose of using the Internet is a marketing one, namely to enhance the image and supply product information. So far, the firm has not set any formal structure for the Internet unit and Internet-related activities are enjoying little visibility in the organization, mainly driven by individual interests. This can be seen as the first step a firm takes towards improving customer service through providing more information about its services and products. It is not very innovative since the Internet is used just as yet another information channel.

Usually customers would require more information, more interaction and transactions, and as a response to such demands, further investments in money and attention are devoted. Hence the beginning of the second stage: transaction stage. A small full-time technical group of staff is set up assuming responsibility for establishing and maintaining

the Internet site. The investment at this stage is still lacking a clear vision and the site is mainly used as a context within which customers can carry out basic transaction, such as paying bills, transferring money from one account to another, etc. The Internet is used as a cost-efficient supplementary channel to banks' branches, for promoting, transaction and delivering services and products.

According Rose (2000) at transaction level, Internet banking may provide services to customers in seven categories:

- Opening an account
- Deposits and withdrawals
- Rates and fees
- Navigation and ease of use
- Bill paying
- Security
- Customer service



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In the third stage, the Internet unit develops its own structure where marketing-related and technology-related activities are separated. The online unit begins to gain the status of a stand-alone unit, conducting its own activities and pursuing its own objectives. The firm will expand the range of services and products offered, paying increasing attention to customer demands, by appreciating more and more the importance of the information it can gather from its customers and using it as input in developing new products and services. In order to innovate and create new products and services that solve more of the customer's overall problems and needs, the firm may have to join forces and collaborate with other partners. At the same time, it begins to make more sophisticated use of its site, such as customising it according to the requirements of customers. This may imply the addition of more technical features such as connecting the Internet with mobile telephones and offering the customer online services no matter where they are.

Therefore, this study considers one important dimension under the key concept called "Scope of e-banking applications" to measure effectiveness of e-banking applications.

2.4.3 Service Quality of E-banking

E-banking acceptance depends probably on bank service quality, customer preferences and satisfaction (Olga Luštšik -2003).

When customers are considered they seek slightly different kinds of benefits from e-banking. In the study on online banking drivers Aladwani (2001) has found, that providing faster, easier and more reliable services to customers were amongst the top drivers of e-banking development.

As regards to loyalty, perceived service quality and satisfaction have been identified as key determinants in banking, as well as in other service industries (Dick and Basu -1994). Service encounters between customers and contact personnel are a critical component of service quality (Chandon et al 1997) and in the marketing of services (Crosby et. al 1990, Czepiel 1990). This is particularly for services characterised by a high degree of person-to-person interaction. For contact personnel, engaging in good interactions with customers is a major concern, since the customer comes away from the service interaction with the feelings of satisfaction or frustration. Berry (1983) argues that service loyalty is more dependent on the development of interpersonal relationships as opposed to (tangible) product loyalty. A contact person can be described as having the role of being a 'relationship manager'. Crosby et al (1990) argue that it is – in part – the quality of the relationship between the contact person/relationship manager and the customer that determines the probability of a continued interchange between the parties in the future. In the services context, intangible service quality attributes such as reliability and confidence may play a major role in building or maintaining loyalty (Dick and Basu 1994).

Superior service quality is widely acknowledged as a driver of perceived value, which, in turn, will enhance customer loyalty (Parasuraman and Grewal, 2000) and improve the provider's image, sales and profitability (Buzzell and Gale, 1987; Gummesson, 1993). Therefore, the notion of service quality has been examined in previous studies of various industries (e.g. Babakus and Mangold, 1992; Carman, 1990; Chow, Fischer and O'Bryan,

1995; Licata, Mowen and Chakraborty, 1995; Siu and Cheung, 1999, 2001; Siu and Woo, 1997 and 1999).

More than a decade ago, Parasuraman, Zeithaml and Berry (1988, 1991) conducted extensive studies in different industries and developed the service quality instrument: a 22-item scale with a set of service quality dimensions to quantify a customer's assessment of a company's service quality. Five key dimensions of service quality such as reliability, responsiveness, assurance, empathy and tangibles - have been identified and form the foundation on which a lot of other studies on service quality have been built. Service quality is widely recognized and used, and it is regarded as applicable to a number of industries, including the banking industry (Yavas, Bilgin, Shemuell, 1997).

However, service quality has been subject to certain criticisms, including vagueness in the definition of expectations, its dubious applicability in some industries (Teas, 1993), the need for expectation measurement (Cronin and Tayer, 1992, 1994), and service quality's dimensionality (Carman, 1990). Moreover, the traditional service quality dimensions cannot directly apply to e-banking, because it represents a different and unique service delivery process. Different dimensions have been adopted in previous studies measuring electronic service quality. For example, in their examination of Internet pharmacies, Yang, Peterson and Huang (2001) measured consumer perceptions of service quality using six dimensions: ease of use, content displayed on the web site, accuracy of content, timeliness of response, aesthetics and privacy. However, such scale has not been empirically validated. Lociacono, Watson and Goodhue (2000) established a scale called web quality with twelve dimensions: informational fit to task, interaction, trust, response time, design, intuitiveness, visual appeal, innovativeness, flow, integrated communication, business processes and substitutability. Their approach, however, seems more pertinent to interface design than to service quality measurement (Zeithaml et al., 2002). Based on concepts from both the service quality and retailing literature, Wolfinbarger and Gilly (2002) developed a scale named .comQ with four factors: web site design, reliability, and privacy/security and customer service. Previous studies of e-banking service quality are scarce. After extensive literature review, Zeithaml, Parasuraman and Malhotra (2000, 2002) developed the e-service quality measure of

electronic service to study how customers judge e-service quality. This new model was drawn up through a three-stage process involving exploratory focus groups and two phases of empirical data collection and analysis. It contains seven dimensions: efficiency, reliability, fulfillment, privacy, responsiveness, compensation and contact. The first four dimensions are classified as the core service scale, and the latter three dimensions are regarded as a recovery scale, since they are only salient when online customers have questions or problems.

Efficiency refers to the ability of the customers to get to the web site, search for information and log out with minimal effort. Fulfillment involves the accuracy of service promises, having products in stock and delivering the products in the promised time. Reliability is associated with the technical functioning of the site, particularly the extent to which it is available and functioning properly. Privacy is related to assurance that shopping behaviour data are not shared and that credit card information is secure. Responsiveness refers to the ability of e-tailers to provide appropriate information to customers when needed. Compensation involves receiving money back and returning shipping and handling costs. Contact is associated with the ability of customers to talk to a live service agent online.

Another factor that would stand in the way of consumer adoption of e-banking is the cost factor. In Internet banking, two types of costs are involved. First, the normal costs associated with internet access fees and connection charges and secondly the bank fees and charges. Rothwell and Gardiner (1984) observed that there are two fundamental sets of factors affecting user needs, namely price factors and non-price factors. In this context, Guadagni and Little (1983), Gupta (1988), Mazursky et al., (1987) have identified price as a major factor in brand switching. If consumers are to use new technologies, the technologies must be reasonably priced relative to alternatives. Otherwise, the acceptance of the new technology may not be viable from the standpoint of the consumer. Therefore, this study adapts 4 important dimensions under the key concept called “Service quality of e-banking” to measure effectiveness of e-banking.

2.4.4 Security of E-banking

It is clear that Internet users are hesitant to bank online unless they can rely on their bank sites. Banks have to constantly improve their online security. According to Singh (2001), improving online security is not enough, banks have to publicise their improvements through the media in order to increase consumer confidence. Some of the measures that are available to banks include: secure socket layer encryption methods to protect data being transmitted from the bank to the customer and vice versa, regular upgrades of firewall hardware and software, and digital signatures. Banks use digital certificates to assure customers that the site they are visiting is a bona fide site, and that transactions are secure. Similarly, banks need to be assured that the person on the other side is their customer. Customers should be able to append a digital signature as a measure over and above the use of a password. Standard Bank have taken great steps to ensure that they are transacting with a bona fide customer by introducing a “double lock” system that asks for a pin, followed by a password, but all online customers are not aware of this (Singh - 2001).



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According to Cooper (1997) and Daniel (1999) another important factor affecting the acceptance and adoption of new innovation is the level of security or risk associated with it. Even in countries where e-banking has long been established, one of the most important factors slowing progress of this new innovation is the consumers' concern for security of financial transactions over the Internet. An empirical survey by Sathye (1999) on Australian consumers has confirmed this fact. There are five underlying security principles described in the following.

2.4.4.1 Privacy

It has been defined as a belief of the consumer's opinion regarding the respect of personal information confidentiality and the maintaining of his intimacy by the various agents, fundamentally companies, with which he interacts in Internet applications. Recent studies have shown the importance that users give to this factor when they consider developing exchanges online and, more precisely, commercial transactions.

2.4.4.2 Confidentiality

When a message is sent electronically, the sender and receiver may desire that the message remain confidential and thus not be read by any other parties (Greestain and Feinman -2000).

2.4.4.3 Integrity

When a message is sent electronically, both the sender and receiver want to ensure that message received is exactly the same as the message transmitted by the sender. A message that has not been altered in any way, with intentionally or unintentionally is said to have maintained its integrity (Greestain and Feinman -2000).

2.4.4.4 Authentication

When an electronic message is received by a user or a system, that identify of the sender needs to be verified in order to determine if the sender is who he claims to be (Greestain and Feinman -2000).



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2.4.4.5 Non - Repudiation

The term repudiates means to refuse to accept as having rightful authority or obligation as in refusing to pay debt because one refuses to acknowledge that the debt exists. For business transactions, unilateral repudiation of a transaction by either party is unacceptable and can result in legal action (Greestain and Feinman - 2000).

The Internet is still undergoing development therefore security is a huge issue and the highest priority concern from the end user. Furthermore, banks are organisations which base their business on the security aspect. Therefore e-banking must be secured and protected in order to protect the secrecy of their clients' information and data.

2.5 Factors Contributing for Effectiveness of E-banking – Bank’s Perspective

So far literature survey on e-banking have considered customer perspective. Apart from the customers, the banks should also look into the benefits that they will attain through e-banking.

In the present banking scenario all banking operations gradually came to be measured in terms of their ability to generate profits, likely effectiveness of e-banking also must be measured in terms of its ability to generate profits. Therefore we considered profitability of e-banking as an independent variable.

2.5.1 Profitability of E-banking

According to the Internet Banking Development and Prospects Report (2000), institutions offering e-banking out-performed non-Internet banks in terms of profitability, with the exception of newly formed (“de novo”) institutions. The return of assets (ROA) and accounting efficiency (non-interest expense to net operating revenue) were higher for institutions offering e-banking than those that did not.

Since Internet banking often serves a relatively small share of a bank's customer base as a delivery channel, reports have been unable to determine the impact on bank performance. For example, Moody's Investor Service (2000) stated that "Moody's does not foresee much impact from the internet on large U.S. banks' core profitability or competitive position - at least in the near term. "A 1999 report by Hitt, Frei and Harker found that banks' investment in Internet banking had not resulted in "new, profitable customers to the firm, as many banks had hoped. Rather, it seems to be to retain high-value customers."

Contrary to the above mentioned studies, the 3rd quarter of 1999 report clearly shows that the, differences in performance between Internet and non-Internet banks are beginning to emerge. Institutions offering Internet banking were clearly winners (Michele Petry-2001).

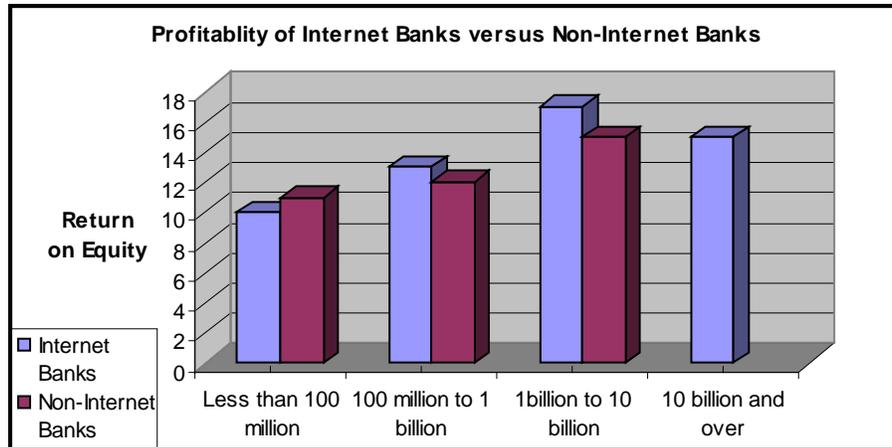


Figure 2.1 Profitability of Internet Banks versus Non-Internet Banks

(Source: Michel Perty-2001)

2.5.1.1 Revenue Growth

The business benefit of the internet according to Dow (1997) is to generate additional revenue, improve customer service, extend marketing, and increase cost saving. This applies for banks also. In an article entitled “Next-Generation Retail Banking” (2001), the business drivers for internet banking include additional transaction revenues as a key element of internet banking. Banks can derive revenues over and above their offline revenues, by charging for online services, and value added services such as providing a portal for financial services linked to short and long term insurers, links to stock brokers, and links to foreign banks (Singh - 2001).

E-banking has exploded onto the web and the Internet is a powerful and cost effective medium for business to interact with and service their customers. The number of online banking services to customers continues to grow and the Internet offers enormous opportunities for banks, and other financial services to fundamentally reshape their organizations. Banks can generate revenue through increased account access fees and benefit from promotional opportunity to cross-sell products such as credit cards and loans (Yerkes - 1988).

2.5.2 E-banking as a Strategic Tool

As a result of open-market forces such as the threat of competition, customer demand, and technological innovations the banking industry is now a very mature one and banks are being forced to change rapidly. To retain banks competitiveness, they must focus on customer retention and relationship management, upgrade and offer integration and value added services to their customers. In addition, to remain cost-effective, forming strong alliances and joint ventures with other non-banking entities must become a major strategic weapon in a volatile and rapidly-evolving marketplace. Therefore e-banking is an innovative strategic tool for banks. E-banking is a successful strategic weapon for banks to remain profitable in a volatile and competitive marketplace of today (Chandana and Paula – 2001).

Banks have rapidly introduced innovative banking technologies and e-banking services in recent years. Almost all banks have invested in expanding and improving the IT systems and a number of new e-banking services have been developed. All major banks have declared e-business as one of the core strategies for the future developments (Olga Luštšik -2003).

2.5.2.1 Competitive Strategy

Electronic banking saves time and money for users. For banks, it offers an inexpensive alternative to branch banking and a chance to enlist remote customers. Many banks are beginning to use home banking, and some use e-banking as a major competitive strategy. One such bank is Wells Fargo, (www.wellsfargo.com) where 7 million online bank accounts were opened in 1999 (Turban-2005).

2.5.2.2 Distribution Channel Strategy

Mols (1999) points out that the Internet banking strategy only requires on single branch as all normal routine transaction are handled through the Internet. For present banks, a pure Internet banking strategy requires radical changes in the branch network. The number of branches has to be reduced and the banks have to build new competences.

The staff will have to be reduced because of efficiency gains and some will have to be replaced because of inadequate skills. Regarding smaller banks, they will have to find suitable partners with whom they can cooperate on the development of their Internet banking services. However, the strategy has the advantage that it aims at serving the fastest growing customer segment. Thereby it becomes a means to gain a larger market share. In addition it is a low cost strategy because the Internet is a much cheaper distribution channel than the traditional branch network. The disadvantage is that it is difficult for Internet banks to differentiate their offering (Birch and Young, 1997). Thus, the market is more transparent and the competition is fiercer. For example, Hamill (1997) predicts that the Internet will lead to a narrowing of price differentials and, as described by Birch and Young (1997), it may become increasingly difficult to earn a profit because of intense price competition.

Recently, Stamoulis et al. (2002) proposed a model for assessing the business value of e-banking distribution channels which applies five perspectives: customer, marketing, finance, technology, and strategy perspectives. These perspectives can be used to evaluate business value along two viewpoints, internal and external. The internal view means that the e-banking distribution channel is considered as a resource providing efficiency, effectiveness, market expansion, and competitive advantages to the financial service provider. Business value from the external view derives from the customer viewpoint, and is measured by the extent to which the e-banking channel supports the relationship between the bank and its customer.

2.5.3 Customer Relationship Management

“Building strong customer interaction, accessibility... will lead to successful long-term customer relationships” (Roland -2002).

2.5.3.1 Interaction

Interaction is one of the key components in the customer relationship management. There must be a real relationship between bank and customer. When a customer initiates

contact with a bank, how that particular bank responds to the customer needs will influence the level of relationship between bank and customer. In considering e-banking the extent to which e-banking promotes real relationship with the bank customers is an important aspect of e-banking (Roland -2002).

Customer relationship management entails all aspects of interaction a bank has with its customer, whether it is sales or service related. E-banking has changed the way banks are approaching their customer relationship management strategies because it has also changed consumer buying behavior. With each new advance in technology, especially the proliferation of self-service channels like the web and e-banking, more of the relationship is being managed electronically. Therefore organizations are looking for ways to personalize online experiences through tools such as help-desk software, e-mail organizers and web development applications (Roland -2002).

To what extent does customer engage in real-time interaction with bank? Try to measure the length, intensity, and satisfaction of conversation and interactions between bank and customer is an important aspect in on line business (Roland -2002).

New technology provides for true interactivity. This interactive element is of crucial importance since much business activity consists of interactions (human and technical communication, data gathering, collaborative problem-solving, negotiation). Indeed, a recent McKinsey report suggested that 51 per cent of US and 46 per cent of German labour costs are accounted for by interactive events (Butler et al., 1997). Interactivity today allows the customer to shape the product or service and the supplier to learn from the customer.

2.5.3.1 Accessibility

Accessibility is playing an important role in e-banking. Banks must make their services easily accessible using website. Accessibility mean how does a customer reachable a particular bank web site in a more convenient and user-friendly manner. This aspect will influence the level of relationship between bank and customer.

East of access: How it is easy for a customer to contact bank? What difficulties has the customer experienced in the past trying to contact a bank on line? What can a bank do better or differently to improve customer accessibility in the eyes of the customer? These are some important questions in the e-banking context. Banks must concentrate on these aspects in the future (Roland -2002).

Customer relationship management (CRM) can be facilitated by the data acquired and captured on the corporate database. Products and services can be customised to suit the needs of the customer, or groups of customers, thus breeding customer loyalty. The Internet has become a bona fide member of the banking family of services. However, its evolution is far from over (Goldfinger: 2001). There are a number of challenges facing Internet bankers, which includes online payment, security and customer service.

New information technology-based self-services is expected to influence the nature of the customer relationship as self-services replace traditional service encounters in a (bank) branch office. However, banking services provided through the internet may substitute both branch office service encounters and replace other self-service channels as tele-banking and postal services.

From the banker's perspective, the increasing use of a self-service technology such as the Internet – which may imply a distancing from the individual client – poses the challenge of how to maintain or strengthen the relationship with her/him. According to Lynch (1996) there are a number of paradoxes that bankers, “from the USA to Japan and from Europe to Australia” are confronted with as it comes to relationships with their clients.

According to one of Lynch's paradoxes, e-banking is also to a large degree revolving around a distance and closeness paradox: Banks want to cut costs – through technology-based self-service use (i.e. often implying a lower level of customer contacts, which can be perceived of as an increasing distance between the client and the branch office) – and at the same time to have near/strong customer relationships, in order to strengthen customer loyalty.

2.5.4 Operational Efficiency of E-banking

Achieving operational efficiency is mandatory for success in today's market. Efforts to align business and IT put companies on the right track for business innovation and continued IT investment, resulting in an enterprise that is effective, agile, dependable and secure. Far from a pure cost-cutting exercise, operational efficiency can free up the necessary resources to support business innovation (www.microsoft.com).

2.5.4.1 Reduce Costs

In an article entitled Next-Generation Retail Banking (2001), the business drivers for internet banking include savings from reduced transactional costs as a major element of cost reduction. On the internet, the customer serves himself, and as such negates the need for frontline staff. Savings are gained from reductions in staff, reduction in branch sizes, reduction in consumable costs such as paper, ink cartridges, and other stationery (Singh -2001).

Technical innovations such as 'bank on telephone' and e-banking over the Internet in recent years have become more and more common as the channel choice for the households in their interactions with the bank. These new technical innovations make it easier for both the bank and for the clients to; e.g., to carry out transactions and to buy and sell stocks. The incentives for the new banking channels are, among other reasons, expectations for increased productivity, decreased costs and increased value added for the clients. The value added for the clients is based on an increased availability, since the clients become less dependent upon time and place (Storbacka -1994).

Jeevan (2000) observes that the Internet enables banks to offer low cost, high value added financial services. US web-corporation argues that finally banks are finding that a comprehensive online banking strategy is essential for success in the increasingly competitive financial services market. Competition and changes in technology and lifestyles have changed the face of banking and banks in the present environment are seeking alternative ways to provide and differentiate their services.

Electronic banking offers several benefits, both to the bank and to its customers, such as expanding the customer base and saving the cost of paper transactions (Mahan 1996).

2.5.4.2 Increase Productivity

With Internet banking, innovation certainly improves productivity via cost cutting in distribution (Chang-2004).

The business benefit of the Internet according to Dow (1997) is to generate additional revenue, improve customer service, extend marketing, and increase cost saving. In an article entitled Next-Generation Retail Banking (2001), the business drivers for internet banking include additional transaction revenues as a key element.

2.6 Other Related Research

1. According to the research conducted by Guerrero .et.al, (2002) on profiling the adoption of online banking services in the European Union reveals banks and customers of financial services are obtaining diverse benefits from the generalization of online banking services. In this regard, diverse studies have analyzed the characteristics of e-banking adopters, mainly focused on their sociodemographic traits. Lesser emphasis has been placed on analyzing behavioural indicators, which clarify relevant internet-specific dimensions to explain the use of e-banking services.

The results of their study have relevant implications for managers of financial entities. Such companies should focus their promotion activities, aimed at increasing the adoption of the online distribution channel, on customers with more advanced internet usage patterns. Strategies focused on such customers will be more likely to succeed, and will achieve higher adoption rates of online banking services at higher paces. Their research has confirmed significant effects of certain sociodemographic variables on the use of e-banking services. Such sociodemographic variables should be taken into account for the development of financial marketing strategies, aimed at increasing the relevance of the Internet as a distribution and communications channel among current and potential customers.

2. According to the research conducted by Furst, et.al, (2000) on Internet Banking: Developments and prospects, several significant differences between the profile of banks that offer Internet banking and that of banks that do not have been identified. Broadly speaking, Internet banks rely more on noninterest income and less on deposits for funding than do non-Internet banks. Internet banks have better accounting efficiency ratios and higher returns on equity than non-internet banks. Internet banks with assets of less than \$100 million had significantly worse accounting efficiency and profitability ratios than non-internet banks of the same size.

Those differences in performance were primarily due to the influence of newly started small banks offering Internet banking. The low percentage of customers using Internet banking, as well as the relatively modest cost of setting up an Internet banking web site, makes it unlikely that Internet banking is having a sizeable positive or negative impact on the bottom line of most institutions.

However, an exception to this generalization might be found among the handful of large banks with a disproportionately large share of Internet banking. And Internet banking may be a primary reason why some small banks, particularly newly started institutions, are unprofitable. Some of these institutions may be relying heavily on an internet-based business strategy, and the full costs of offering Internet banking, while not prohibitive, may be significant for these banks. Further investigation will be needed to determine why newly started Internet banks perform poorly and whether their performance will improve as electronic banking and electronic commerce expand over time.

Thus, Internet banking could accommodate the sudden, rapid growth that has occurred in other information-intensive industries such as securities brokerage, book selling, and travel. So far, however, bank customers have not been persuaded that Internet banking products and services warrant a substantial change in their banking habits (Furst, et.al, -2000).

There is no doubt that the revolutionary developments in information and communications technology will continue to transform the banking and financial industry. Internet banking, despite the uncertainties about its future, will be an important part of transformation.

Their paper attempts to provide a useful picture of the current market for Internet banking, the factors affecting the decision to adopt internet banking as well as the scope of services offered, and information on banks' plans for the future. They believe this is an important initial step in analyzing the future impact of internet banking on the banking industry. Furst, Lang, and Nolle (1998) argue that the likely method of increasing the value added by internet banking for banking customers is to improve online methods of bundling information. A smooth end-to-end electronic process would eliminate costly paper records of transactions. They also argue that businesses rather than individual households would likely benefit most from such improvements, at least initially.

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3. According to the research conducted by Saman et.al (2003) on the effectiveness of e-banking service at Bank Islam Malaysia Berhad (BIMB) was carried out by the bank, which evaluated customer satisfaction towards e-banking. Indeed, the advancement of technology has played an important role in determining the success of an organization focused on the concept of service quality of e-banking on BIMB. The importance of service quality is highly recommended to any institution in meeting customer satisfaction. This study is aimed at determining area that need to be improved by the bank in order to be competitive in this era of globalization. Their paper is guided by Parasuraman's model of service quality which emphasized on some aspects of service quality such as reliability, responsiveness, assurance and empathy.

Their paper has focused on identifying the relationship of service quality and its effectiveness in meeting customers' satisfaction on e-banking. The findings from questionnaires had been analyzed and it can be concluded that there are areas of service quality that should be given priority (Saman et.al -2003).

2.7 Derivation of Research Model

After conducting a literature survey in the field of e-banking, the following research model was formulated. This research model has captured the important key concepts and variables to be considered in measuring the level of effectiveness of e-banking in Sri Lanka.

Table 2.1 Research Model

Effectiveness of e-banking	Customer's Perspective	Customer attitude towards e-banking	Trust
			Customer acceptance
			Promotional activities of bank in promoting e-banking
		Scope of e-banking applications	Comprehensiveness of e-banking applications/ Range of e-banking services.
		Service quality of e-banking	Efficiency
			Reliability
			Responsiveness
	Security of e-banking	Privacy	
		Integrity	
		Authentication	
	Bank's Perspective	Profitability of e-banking	Revenue growth
		Considering e-banking as a strategic Tool	Competitive strategy
			Distribution channel strategy
Level of Customer Relationships		Interaction	
		Accessibility	
Operational Efficiency of e-banking		Reduce costs	
	Increase productivity and speed		

2.8 Chapter Summary

The reviewed literatures have given only some guideline to develop an appropriate research model for this study in measuring effectiveness of e-banking in Sri Lanka. There are literatures that explore the influencing factors on e-banking effectiveness in customers as well as banks perspectives. But those studies are not clearly specifying the factors contributing for the effectiveness of e-banking in the customer as well as bank perspectives. However these reviewed literatures did not exactly contain the factors that we intended to explore. The reviewed literatures give some insights into these factures and were somewhat helpful to design the framework for this particular study and conceptualize the factors related.



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