Factors Affecting Customer Retention in Internet Banking among Hong Kong Professionals and Business Practitioners

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I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a university degree or other similar qualification to any other University or Institution.

_________________________________________
Yau Suk Ching Eppie
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ABSTRACT

Internet banking has revolutionized the E-commerce industry since the nineteenth century. The greatest benefits of this new form of banking for banks are that it has generated enormous cost-saving and efficiency in communication, transaction and delivery. However, it has intensified the competition between banks as well as allowing customers to easily compare offers provided by different banks. This ‘frictionless commerce’ tends to raise customers’ expectations about services and products and makes them more prone to switching to other service providers.

In order to minimize threats and maximize opportunities, banks should actively retain customers in the virtual place. Profitable customers in retail banking take up less than half of any bank’s customer base. In addition, the characteristics of the Internet channel lead to low differentiation, competing on monetary return and product attribute alone may not be sufficient to retain customers. Factors affecting customer retention have not been investigated in detail from an Internet-banking stance.

Customer satisfaction has been empirically validated to have a relationship with customer retention in service sector. Customer commitment, however, in a business relationship goes beyond satisfaction. In a setting of low-customer contact and mass service, trust is an important driver of customer retention. This research postulates on how customer satisfaction, customer commitment and trust impacts on the profitable customer segment of professionals and business practitioners in the context of Internet banking in Hong Kong.
Data from 208 survey questionnaires collected from ten professional/business organisations measuring the relationships between the various constructs have been analysed. The findings revealed that customer satisfaction, a transaction-specific attribute, has a significant positive impact on customer retention in the scope of Internet banking in Hong Kong, which concurs with extensive academic literature. Customer commitment and trust, relational-specific attributes, have negative influence on customer retention in the context. These two factors, as single effort with or mediating for customer satisfaction, do not display an effective role in enhancing the relationship towards customer retention. This finding seems to have refuted traditional marketing phenomenon in the context of non-Internet paradigms.
CHAPTER 1 INTRODUCTION

1.1 Introduction

This chapter introduces the research project. Section 1.1 introduces the sections in the chapter. Section 1.2 provides the background to this research – Internet banking. Section 1.3 reports on the literature review leading to the research problem. Section 1.4 identifies the research gap, states the research objectives and confirms the significance of the study. Section 1.5 depicts the research model of this study. Section 1.6 determines the research methodology of this study and the relevant ethical issues. Section 1.7 presents the structure of this thesis.

1.2 The Background of Internet Banking

Nineteenth century banking was transformed by political, economic, social and technological changes to create a new competitive environment to the banking industry (Jayawardhena and Foley, 2000). Of all the changes, technology has dominated the revolution (Bednar, Reeves & Lawrence, 1995; Gandy, 1998). As the general public becomes more computer literate and the price of personal computers drops, the number of Internet banking users has grown substantially (Karjaluoto, Kovivumäki & Salo, 2002) whereas the branch-banking customer segment has shrunk (Mols, 2000). The Internet is claimed to be the base for a new industrial structure (Furash, 1999) that has uprooted the medieval foundations of the banking system (Nehmzow, 1997).
1.2.1 Opportunities and Threats of Internet Banking

The popularity of Internet banking has created opportunities as well as threats for the service providers. The biggest benefits of Internet banking for banks are enormous cost-saving and efficiency in communication, transaction and delivery (Peterson, Balasubramanian & Bronnenberg, 1997; Furash, 1999; Robinson, 2000). Although new forms of banking can offer promising opportunities, at the same time, they have intensified competition between banks for customers (Vatanasombut, Stylianou & Igbaria, 2004). Non-bank operators entering the banking arena have mushroomed around the globe (The Economist, 2000; Itoh, 2001).

Internet banking not only intensifies competition, it also enables customers to easily compare the terms and conditions of the financial products or services offered by different banks (Rogerson, Foley & Jayawardhena, 1999). This ‘frictionless commerce’ tends to raise customers’ expectations about services and products and could lead to dissatisfaction and make these customers more prone to switching to other service providers (Shankar, Urban & Sultan, 2002). Figure 1.1 diagrammatically presents the threats and opportunities for Internet banking.

**Figure 1.1: Threats and Opportunities of Internet Banking**

- **Threats:**
  - Keen competition
  - Difficulty in retaining customers

- **Opportunities:**
  - Enormous cost-saving
  - Efficiency in delivery
1.2.2 Customer Retention in the Context of Internet Banking

In order to minimize risks and maximize opportunities, banks should retain customers in the virtual place so as to gain profit from offering Internet banking. It has been proved that increased customer retention leads to additional sales, lower costs, more endurable higher prices and free recommendations (Reichheld and Schefter, 2000). However, not all customers are profitable (Petro, 1990; Cooper and Kaplan, 1991; Peppers and Rogers, 1993; Slywotzky and Shapiro, 1993; Wang and Splegel, 1994; Wayland and Cole, 1997).

In retail banking, 50-60 percent of customers are unprofitable (Storbacka, Strandvik & Grönroos, 1994). One empirical study by a New Zealand bank revealed that one third of its customers accounted for 98 percent of its profit (Garland, 2002). Figure 1.2 shows the proportion of profitable and non-profitable customers. Logically, banks should actively build relationships with profitable customers (Shapiro, Rangan, Moriarty & Roos, 1987; Slywotzky and Shapiro, 1993; Jones and Sasser, 1995).

![Figure 1.2: Profitable and Non-profitable Customers of a New Zealand Bank](Source: Garland, 2002)
1.2.3 **Profitable Bank Customers**

Statistics show that the two occupation categories of ‘managers and administrators’ and ‘professionals and associate professionals’ in Hong Kong earn well above the overall income standard (Hong Kong Monetary Authority, 2004b). These professionals and business practitioners routinely work around the clock seven days a week and often have to travel with their laptops for business. To these ‘cash-rich but ‘time-poor’ computer-savvy professionals and business practitioners, performing their banking business with the click of a mouse anytime and anywhere seems to be the perfect solution to help them manage their money (Hagel, Hewlin & Hutchings, 1997). Logically, these people are the potentially profitable customers for Hong Kong banks and should be targeted for retention.

1.3 **Factors Affecting Internet Banking Customer Retention**

The Internet channel, however, possesses some characteristics that make it difficult for companies to retain customers. The characteristics often lead to increased competition (Chatterjee and Narasimhan, 1994; Choudhury, Harzel & Konsynski, 1998), low differentiation (Dholakia and Rego, 1998) and commoditization of the market (Bakos, 1997). Competing on monetary return and product attribute alone may not be sufficient to retain customers (Cravens, 1995).
1.3.1 Customer Satisfaction

The factors affecting customer retention are diverse. Of the numerous factors, customer satisfaction has been empirically validated to have relationship with customer retention in the service sector (Anderson and Sullivan, 1993; Rucci, Kim & Quinn, 1998; Bansal and Taylor, 1999; Cronin, Brady & Hult, 2000; Ranaweera and Prabhu, 2003a). The importance of satisfaction on customer retention is so well recognised that some major economies measure satisfaction at the industry level to predict customer retention and future financial performance (Fornell, Ittner & Larcker, 1995). It has been cited that repeat purchase depends on satisfying customer needs and wants (Kotler, Armstrong & Cunningham, 2002).

1.3.2 Customer Commitment

Although accumulated evidence indicates that customer satisfaction influences repurchase behaviour, this explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). Satisfied customers may leave a relationship and dissatisfied customers do not necessarily switch to a competitor (Reichheld, 1993). Firms need to go beyond mere satisfaction to retain customers in a competitive business environment (Morgan and Hunt, 1994; Bendapudi and Berry, 1997; Hart and Johnson, 1999). Studies suggest that strong interpersonal relationships positively influence customers’ intention to repurchase in the case of low customer satisfaction (Jones, Motherbaugh & Beatty, 2000). Commitment in a business relationship goes beyond satisfaction and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson, Soni & O’Keefe, 1995). It has also been cited that commitment is positively related to intentions to repurchase (Fullerton, 2005). Service providers implementing effective relationship-specific investment can increase customers’ dependency, thus inhibiting switching (Berry and Parasuraman, 1991).
1.3.3 Trust

Firms rely on commitment and trust to maintain long-term relationships with customers (Hennig-Thurau and Klee, 1997). A study of consistent theatergoers reveals commitment and trust as mediating factors affecting attitude for continuing to go to the same theatre (Garbarino and Johnson, 1999). In service firms, the psychological benefit of trust is more important than social benefits or special treatment in consumer relationships (Gwinner, Gremler & Bitner, 1998). In a setting of low-customer contact and mass service, trust is an important driver of customer retention (Ranaweera and Prabhu, 2003a).

1.4 Research Gap, Objective and Significance

1.4.1 Research Gap

Studies on how to successfully retain customers in the context of Internet banking remain limited (Gallaugher, 1999). An understanding of customer retention and satisfaction with a service delivery that is a technology-based self-service is rare (Yen and Gwinner, 2003). Studies into the effects of customer commitment on switching providers or customer retention have been extremely insufficient (Bettencourt, 1997; Garbarino and Johnson, 1999; Pritchard, Havitz & Howard, 1999). Even though studies have been done on the behaviour of Internet customers, the field is still in an exploratory stage (Ranaweera, McDougall & Hansal, 2004). Accordingly, one can identify a research gap pertaining to previous researches into the examination of customer satisfaction, commitment and trust in the scope of Internet banking.
1.4.2 Research Objective

Furthermore, only a few banks use customer-segment and profitability information to focus their marketing efforts (Donner and Dudley, 1996). It has become apparent that studies into segmentation in personal financial services have been inadequate (Harrison, 1994). Thus, a research topic ‘Factors Affecting Customer Retention in Internet Banking among Hong Kong Professionals and Business Practitioners’ is confirmed with the aim of investigating how customer retention in the scope of Internet banking in Hong Kong is affected by customer satisfaction, customer commitment and trust among professionals and business practitioners. The objective of the study is to measure the factors influencing customer retention in this context.

1.4.3 Research Significance

This research has practical significance. Once banks understand the factors affecting customer retention on the Internet channel, they can design their marketing strategies to cope with the challenges of keeping profitable customers in the virtual market place to enjoy such relevant advantages as enormous costs savings and increased efficiency in transaction and delivery (Furash, 1999; Mols, 1998) and, more important, profitability (Fornell and Wernerfelt, 1988; Anderson and Sullivan, 1990). For bank customers, the advantages of Internet banking lie in being provided with new levels of convenience with no time constraints (Jeon and Rice, 1997), as well as greater flexibility in banking services. By staying with the same Internet service provider, service users can save on switching costs while avoiding the potential risks caused by switching. Since both banks offering Internet banking services and bank customers have widely adopted the medium, this research can be of value to both entities (Quelch and Klein, 1996).
For academia, the findings of this research will provide empirical evidence and may add new knowledge to the existing marketing literature in the understanding of the impact of the complex relationship between customer satisfaction, commitment and trust on customer retention in the technology-based self-service area of Internet banking.

1.5 Research Model

Figure 1.3 depicts a conceptual research model showing the hypothesized relationship existing between factors, customer satisfaction, customer commitment and trust, on customer retention in the context of Internet banking.

![Conceptual Research Model of This Study](image-url)
1.6 Research Methodologies and Ethical Issues

A well-defined research objective gives a clear direction in which to design this research. The research design for this study is described in sections 1.6.1 to 1.6.4 for the purpose of meeting the objective of the study. Section 1.6.5 presents ethical issues related to this study.

1.6.1 Quantitative Survey Questionnaire

A one-off cross-sectional quantitative research has been adopted for this research. A survey questionnaire to measure the relationships between the variables of this study and collect demographic characteristics of the respondents has been designed. In order to gain objective views and guard against faulty assumptions and detect flaws in the questionnaire, consultation with experts and pilot tests have been performed.

A seven-point interval Likert scale to examine how strongly respondents agree or disagree with statements to measure variables in the hypotheses of this research has been used. Existing established measures have been modified and adopted for this study (Churchill, 1979). Validity and reliability tests of the measures of the questions in the survey questionnaire have been conducted for valid and reliable data to be analysed correctly to reveal meaningful findings.

1.6.2 Sample and Sampling Design

The target population of this research was all Internet banking users in Hong Kong, which amounts to millions. Since the source of these people is unavailable in the public domain,
judgmental sampling, one of the non-probability methods, was adopted to reach the subjects. It has been suggested that a range of a minimum sample size of 30 and a maximum of 500 is acceptable (Sekaran, 2000). This research targeted 200 respondents.

1.6.3 Data Collection

Two non-profit-making management associations and eight business organizations were contacted and they consented to have their members, employees and associates participate in the survey. Personally-administrated and mail modes to collect data was planned. It was also reasonable to assume that Internet banking users have access to the Internet and that it was logical to post the set of questionnaire and covering letter on the Internet to reach them.

1.6.4 Data Analysis

Data collected was analysed using SPSS version 14.0 for purposes of descriptive statistics, while Partial Least Square (PLS) was utilised to determine the interactions between the various constructs for ascertaining the various structured equation models (SEM). Inter-item consistency reliability was conducted for the consistency of the respondents’ answers to the items in a measure in this research questionnaire.

1.6.5 Ethical Issues

Since this study involved people, a questionnaire and a covering letter inviting participation was designed. The covering letter assured potential respondents that they would remain anonymous, their participation would be voluntary, withdrawal from
answering the questions and completing the questionnaire at any time would not affect them in any way, and that participants would be notified of the findings of the study when the research was completed. The letter also assured respondents that completion and return of the questionnaire implied individual consent of access to the study and that all information collected would be treated as strictly confidential.

1.7 Structure of the Thesis

The structure of this thesis consists of five stages presented in five chapters. The flow of the stages is depicted in Figure 1.4.

![Figure 1.4: Five Stages of This Thesis](image)

Chapter 1 introduces the background to the research topic – Internet banking and customer attitudes affecting their perceptions to retain with the same service provider; stating the title, objective and significance of the research and outlines the overall research work.
Chapter 2 reviews literature from various sources for an understanding of the development of Internet banking, research findings related to the influence of customer satisfaction, customer commitment and trust on customer retention. This chapter also depicts the research model and presents the eleven hypotheses based on the research questions.

Chapter 3 evaluates various research methodologies to deal with the research problems and to meet the research objectives. A research plan incorporating a quantitative survey questionnaire, sampling methods and data collection administration is described.

Chapter 4 analyses the survey results and assesses the research findings. The profiles of the survey sample are presented. Data collected from the survey are statistically analysed and interpreted. Hypotheses are tested and the significance of the variables is demonstrated.

Chapter 5 discusses and concludes the linkage between the research problems, theories, and the findings of the study. Research and practical implications and limitation of this study are presented. Suggestions for further research opportunities are recommended.
CHAPTER 2  LITERATURE REVIEW

2.1 Introduction

This chapter focuses on literature review. A number of related theories and discussions have been reviewed in order to define an analytical approach to the research questions used to structure the research problems. The chapter is divided into nine sections. Section 2.1 introduces the sections in the chapter. Section 2.2 presents the development and adoption of Internet banking. Section 2.3 analyses various aspects of customer retention leading to the identification of profitable bank customer segment. Section 2.4 presents and evaluates different factors affecting customer retention. Section 2.5 reviews various literature to investigate the research problems for the research questions in Section 2.6. Section 2.7 proposes eleven research hypotheses which are depicted into a research model in Section 2.8. Section 2.9 concludes the chapter.

2.2 Internet Banking

2.2.1 A Brief History of Banking

Banking today can be traced back to the European Middle Ages when the Italian Medici bank sought in the fourteenth century to increase its profits by establishing branches throughout Europe and extending loans to merchants, royalty and the Pope (Goldthwaite, 1995). Banks ever since have been developing branch networks to capture market share,
with the result that the first bank to provide a dense branch network in an area gained the leading position in that area (Coyne and Dye, 1998).

Since any bank’s strong network is perceived by customers as that bank’s enormous resources, an extensive branch network provides convenient geographic access to customers and gives customers sufficient sense of security to entrust their money to that bank (Lockett and Littler, 1997). There is evidence that a strong branch network serves as an industry entry barrier to new challengers and to maintaining the concentration rates. In the UK, networking helps to maintain the oligopolistic banking industry through which the few players can exert measurable impacts on competitors (Henderson, 1995).

Times changed such that in the twentieth century banking was failing (Berger, Kashyap & Scalise, 1995; Edwards and Mishkin, 1995; Holland, Lockett & Blackman, 1996). The citation: “Banking is essential to a modern economy. Banks are not. If some other entity performs the functions of banking faster, smarter, or cheaper than banks, it will replace banks” (Furash, 1993, p.20) essentially means that the traditional ‘brick-and-mortar’ banks will be marginalised. In fact, while the overall banking business continues to grow, retail banking is in decline (Wendel, 1993; Berger et al., 1995; Spiegel, Gart & Gart, 1996; Bird, 1997). Section 2.2.2 explains the forces behind this decline.

### 2.2.2 Forces Driving Changes in Banking

Changes in banking are driven by both external and internal factors. The external forces are changing the technological, political, economic and social environments, whereas the internal forces are the threats from new entrants, increasing customer power, and volatile
supply forces (Jayawardhena and Foley, 2000). Figure 2.1 shows the internal and external forces on changes in the banking industry.

Political-economic changes, mainly liberal legislation and deregulation in the banking-services sector, have intensified competition between banks and increased the powers and rights of customers (Trethowan and Scullion, 1997; Noulas, 2001; Waite, 2001). In addition, the growth in aging bank customers, those with their high purchasing power for financial products and services groups, has reshaped the established bank customer base (Bone, 1991; Kennett, Moschins & Bellenger, 1995).
Besides demographic trends, such social changes as attitudes towards technology and workforce mobility now greatly influence customer behaviour (Seipp, 2000). Younger bank customers with high education and a professional occupation are usually ‘computer savvy’ and they tend to use the Internet. They are considered as the typical users of electronic banking services (Sathye, 1999; Jayawardhena and Foley, 2000; Mattila, 2001; Karjaluoto et al., 2002). Volatile supply refers to the regularity of the delivery chain of banks. The force drives banks to sort out a balance between staffing levels, skills and technological development and branch-network investment (Gentle, 1993).

Of all the changes, technology has dominated the revolution in the banking industry (Bednar et al., 1995; Gandy, 1998). Technologies for connection well support the huge volume of global capital flows around financial institutions, and banking based on supplying intensive information needing a minimum of physical exchange is ideally suited to the Internet (Perumal and Shanmugam, 2004).

‘Online banking’ has been defined as the provision of information or services by a bank to its customers over the Internet (Daniel, 1999). ‘Internet banking’ is a term used for performing such transactions as payments, withdrawals, deposits, transfers, and account-checking over the Internet through a bank’s secure website (Wikipedia, 2006). In fact, the terms ‘online banking’ and ‘Internet banking’ are used interchangeably in most published works.

### 2.2.3 Distribution Channels for Banking

Six electronic channels have been identified for communicating with bank customers, and Internet banking is only one of them (Daniel, 1999). Table 2.1 lists and describes six different delivery platforms for electronic banking:
Delivery Platform Description

<table>
<thead>
<tr>
<th>Delivery Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC banking (private dial up)</td>
<td>Propriety software distributed by a bank is installed by its customers on their PCs and access to the bank is made through a modem linked directly to the bank.</td>
</tr>
<tr>
<td>Internet banking</td>
<td>Customers have access to their banks through the Internet.</td>
</tr>
<tr>
<td>Managed network</td>
<td>A bank makes use of an online service provided by another party.</td>
</tr>
<tr>
<td>TV banking</td>
<td>Account information is delivered via satellite or cable to the TV screens of customers (Internet based).</td>
</tr>
<tr>
<td>Telephone banking</td>
<td>Customers use their own personal ID and password to access their bank via telephone.</td>
</tr>
<tr>
<td>Mobile-phone banking (SMS, WAP, 3rd generation)</td>
<td>Customers gain bank access through text message (SMS), Internet connection (WAP), or high-speed 3rd generation mobile connection (also Internet based).</td>
</tr>
</tbody>
</table>

Table 2.1: Delivery Platforms for Electronic Banking
(Source: Daniel, 1999)

As the general public becomes more computer literate and personal computers become cheaper, the number of Internet-banking users has increased substantially whereas the branch-banking customer segment has shrunk (Mols, 2000). At the same time, the increase in Internet use means that the geographic protection of a bank’s customer base has begun to shrink (Heinen, 1996; Evans and Wurster, 1997). Furthermore, as the number of Internet banks increases (Crede, 1997), a decline in the number of bank branches has been observed (Howcroft and Kiely, 1995; Heffernan, 1996; Mols, 2000).
Contrary to the implication that bank branches will vanish in a computerized world, bank branches continue to survive with their role and image transformed to meet the changing business environment (Mendonca and Nakache, 1996; Moutinho, Davies, Peris & Alcaniz, 1997). Technology can enable bank branches to serve their customers better (Wah, 1999). Flexibility increase is one example of this (Burns, 2000). In 2004, the UK-based Barclays Bank cut back its investment in offices and IT to invest in branch staff (Finextra.com, 2004a, 2004b, 2004c). Around the same time the NatWest Bank curtailed its branch-closure programme introduced in 2000 to launch a country-wide branch-refurbishment programme aimed at recruiting more than 17,000 staff in its physical retail outlets (Finextra.com, 2003, 2004b).

In practice, bank customers may prefer to use more than one banking channel for different purposes (Prendergast and Marr, 1994; Mols, 1998). For example, they may want to meet a branch’s staff officer to get financial advice for major investment decisions; they may use the Internet to pay bills; and they may simply pick up the phone to check their account balances. This customer segment has been labelled ‘multiple-channel’, and this multi-channel strategy has grown to become the main model for the European banking business (Mocanu and Filip, 2001). Nonetheless, it is suggested that the main electronic delivery channel in banking is the Internet (Karjaluoto et al., 2002).

2.2.4 Evolution of Internet Banking

Technology as a powerful driver for changes in the banking industry was initially applied during the 1960s to automating processes in the back-office. This was later extended to the front-office and subsequently beyond to the branch (Legg, 1994; Llwellyn, 1995). Interestingly, the introduction of Internet banking was mainly defensive. A
thousand-bank survey revealed that the main impetus for banks setting up websites rests merely upon responding to the actions of competitors (Sheshunoff, 2000). In addition to this, banks copy one another’s work and modify the features and styles as their own in order to control costs in developing new technologies, the result of which is that Internet banking services differ little from service provider to service provider (Gurăău, 2002).

Developing and implementing a winning Internet banking strategy in today’s world of e-commerce is taken as a top managerial priority for local and national banks, as well as for other financial institutions. One prediction is that a retail bank’s competitive advantage rests upon its ability to be the first to master the Internet-based distribution and communication channels (Ghorab, 1997). The role and content of banks’ websites has also evolved over time (Tuchila, 2000), progressing from merely providing general information about a certain bank to communication with customers to now offering a full range of banking services through the Internet (Figure 2.2).

![Figure 2.2: Evolution of a Bank’s Web Presence](Source: Tuchila, 2000)
A survey of 121 bank websites in the US was carried out in 1998 and the functions of these sites were analysed and classified into the following three different opportunities):

1. An information-publishing vehicle;
2. A channel for conducting transactions; and

At the basic level, Internet banking can mean a bank, such as the Saudi Arabian banks, setting up a webpage simply for the purposes of brand awareness and to promote its products and services, (Jasimuddin, 2000). At an advanced level, Internet banking generally involves providing access to accounts, facilitating the transfer of funds, and delivering and trading financial products or services online, such as those now offered by banks in the United States (Diniz, 1998).

Six general reasons have been offered as to why bank customers use the services of banks have been identified (Essinger, 1998), namely:

1. To keep their money safe and secure;
2. To obtain interest payments and other returns on investment;
3. To obtain convenient access to cash;
4. To obtain convenient access to payment facilities;
5. To obtain access to loan facilities; and
6. To obtain status and equality with peer groups

Item 1 and Item 3 (keeping one’s money safe and obtaining convenient access to cash) are the only reasons that might involve the physical presence of cash; a virtual bank can
manage the other items (2, 4, 5 and 6) equally well. By offering Internet transactions, a bank can provide better services in response to items 4, 5 and 6. At the same time, the bank can deal with Item 2 (obtaining interest payments and returns on investment) just as well as it did prior to introducing Internet banking.

The Internet has churned up the working environment, living style and patterns of banking use (Hagel et al., 1997), as well as dramatically changing the delivery channels of banking (Tilden, 1996). The efficiency and convenience of transactions through the Internet is likely to significantly alter customer behaviour and future business practices (Wolfinbarger and Gilly, 2003; Rush, 2004). The Internet has been claimed as the base for a new industrial structure (Furash, 1999) that will uproot the medieval foundations of the banking system (Nehmzow, 1997).

2.2.5 Adoption of Internet Banking

Internet banking has been gathering momentum around the world (Aladwani, 2001). By 2003, most United States banks offered Internet services (Gurăuă, 2002). By the fourth quarter of 2005, Internet banking customers in the United States had grown to nearly 40 million (comScore Study, 2005). Banks in the European Union (EU) countries have been quick to introduce Internet banking as an essential component of their business portfolio (Irish Times, 1999). In 2004, Western Europe, recording 57.9 million users, had the highest adoption rate of Internet banking in the EU. Figure 2.3 shows the growth of Internet banking in the major regions of the world between 2000 and 2004 (International Data Corporation, 2004).
According to Figure 2.3, excluding the category of ‘Rest of the world’, ‘Asia-Pacific (excluding Japan) scored the lowest figure in the growth in Internet banking. However, Hong Kong, being in the Asia-Pacific region, showed the speed of growth by having the highest activity in the region. Table 2.2 shows the penetration of Internet banking between July and October 2001 in the Asia Pacific region.
These statistics show the rapidly growing acceptance of Internet banking in Hong Kong. The number of Internet banking users in Hong Kong increased by 78 percent between January 2001 and January 2003 (ACNielsen/NetRatings, 2003). By December, 2003, there were around 2.2 million personal Internet banking accounts (38% up on 2002) and 67,000 Internet banking accounts belonging to businesses (116% up on 2002). On average, each month in 2003 saw about 4.8 million transactions processed through personal Internet banking (38% up on 2002), while 737,000 transactions were processed through business Internet banking every month in 2003 (five times more than 2002) (Hong Kong Monetary Authority, 2004a).

Despite the promising future outlook for Internet banking in Hong Kong, the adoption of the Internet service does not necessarily mean that customers actually use the service. A
study has shown that only 14.3 percent of adopters actively use Internet banking (Al-Sabbagh and Molla, 2004). In Hong Kong, the situation seems better since a survey revealed that approximately 20 percent of respondents had access to Internet banking services, and most of these respondents claimed to have used the service (ACNielsen Financial Services Study, 2004/5).

Additionally, empirical research findings reveal that Internet banking customers are more satisfied with their bank than non-Internet banking customers (Mols, 1998). Another research found that customer satisfaction with Internet banking was high across the Asia Pacific (ACNielsen, 2002). In the Asia-Pacific region, Hong Kong recorded only six percent Internet of banking customers as being dissatisfied. Singapore had the smallest number of dissatisfied Internet banking customers (4%) in the region, while Taiwan had the most dissatisfied customers in the region (12%), and South Korea and Mainland China both recorded eight percent of Internet banking customers as being dissatisfied with the use of an Internet banking service. Table 2.3 shows the percentage of dissatisfied Internet banking customers in the Asia Pacific region.

<table>
<thead>
<tr>
<th>Countries / Cities</th>
<th>Dissatisfied Internet Banking Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korean</td>
<td>8%</td>
</tr>
<tr>
<td>China (Mainland)</td>
<td>8%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>12%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>6%</td>
</tr>
<tr>
<td>Singapore</td>
<td>4%</td>
</tr>
</tbody>
</table>

Table 2.3: Dissatisfied Internet Banking Customers in the Asia Pacific Region

(Source: ACNielsen, 2002)
2.2.6 Opportunities and Threats of Internet Banking

The popularity of Internet banking has created many opportunities for both service providers and customers. At the same time, however, it has created certain threats. For customers, Internet banking presents such benefits as:

- an extremely efficient medium for accessing, organizing, and communicating information (Peterson et al., 1997);
- no time or location constraints (Jeon and Rice, 1997) because users can do their banking at home, in their offices, in their hotels, or even in an aeroplane; and
- being offered more benefits at lower costs (Mols, 1998).

Banks employing the Internet in their services can:

- research new segments of the population,
- achieve greater efficiency,
- enhance reputation, and
- improve customer service and satisfaction (Brogdon, 1999; Jayawardhena and Foley, 2000).

Above all, the biggest benefits for banks are cost-cutting in communication, transaction and delivery (Peterson et al., 1997; Furash, 1999). The cost of a transaction is considerably less for banks when carried out via an electronic mode than in a branch (Robinson, 2000). Figure 2.4 shows the results of a survey into the processing costs per transaction of the Internet mode in comparison with other delivery channels.
Although new forms of banking can offer promising opportunities, they have also intensified competition between banks for customers (Vatanasombut et al., 2004). By way of testimony, a 2000 survey concluded that (1) e-banking is having the biggest impact on competition among banks and (2) the Internet has become the gateway for new competitors in the search for customers (Davies, 2000).

Non-bank operators entering the banking arena have mushroomed around the globe (The Economist, 2000; Itoh, 2001). Table 2.4 lists some of the non-banking companies competing in the financial market (González and Guerrero, 2004).
<table>
<thead>
<tr>
<th>New competitor</th>
<th>Country</th>
<th>Promoter</th>
<th>Promoter’s activity</th>
<th>Bank partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sainsbury’s Bank</td>
<td>UK</td>
<td>Sainsbury’s</td>
<td>Retailer</td>
<td>Halifax Bank of Scotland</td>
</tr>
<tr>
<td>Tesco Personal Finance</td>
<td>UK</td>
<td>Tesco</td>
<td>Retailer</td>
<td>Royal Bank of Scotland</td>
</tr>
<tr>
<td>Marks &amp; Spencer Money</td>
<td>UK</td>
<td>Marks &amp; Spencer</td>
<td>Retailer</td>
<td>No bank partner</td>
</tr>
<tr>
<td>Uno-e</td>
<td>Spain</td>
<td>Terra</td>
<td>Internet</td>
<td>BBVA</td>
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<td>Egg</td>
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<tr>
<td>Volkswagen Bank direct</td>
<td>Germany</td>
<td>Volkswagen</td>
<td>Car manufacturer</td>
<td>Partner for mortgages; Aareal Bank, SaarLB, AHBR, DSL Bank</td>
</tr>
<tr>
<td>Virgin Money</td>
<td>UK</td>
<td>Virgin</td>
<td>Several</td>
<td>Royal Bank of Scotland</td>
</tr>
<tr>
<td>GE Capital</td>
<td>USA</td>
<td>General Electric</td>
<td>Energy</td>
<td>No bank partner</td>
</tr>
<tr>
<td>S2P</td>
<td>France</td>
<td>Carrefour</td>
<td>Retailer</td>
<td>Cetelem (BNP Paribas subsidiary)</td>
</tr>
<tr>
<td>Cofinoga</td>
<td>France</td>
<td>Galeries Lafayette</td>
<td>Retailer</td>
<td>Cetelem (BNP Paribas subsidiary)</td>
</tr>
<tr>
<td>Shell Capital</td>
<td>UK &amp; USA</td>
<td>Royal Dutch Shell</td>
<td>Energy</td>
<td>Royal Bank of Scotland</td>
</tr>
<tr>
<td>Banca Generali</td>
<td>Italy</td>
<td>Gruppo Generali</td>
<td>Insurance</td>
<td>BSI</td>
</tr>
<tr>
<td>IKANO Banken</td>
<td>Sweden</td>
<td>IKEA</td>
<td>Retailer</td>
<td>No bank partner</td>
</tr>
<tr>
<td>Migrosbank</td>
<td>Switzerland</td>
<td>Migros</td>
<td>Retailer</td>
<td>No bank partner</td>
</tr>
<tr>
<td>Inversis</td>
<td>Spain</td>
<td>El Corte Inglés</td>
<td>Retailer</td>
<td>Cajamadrid, CAM, Banco</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Zaragozano y Cajamar</td>
</tr>
<tr>
<td>Edel</td>
<td>France</td>
<td>E. Leclerc</td>
<td>Retailer</td>
<td>Groupe Crédit Coopératif</td>
</tr>
<tr>
<td>BMW Financial Services</td>
<td>Germany</td>
<td>BMW</td>
<td>Car manufacturer</td>
<td>No bank partner</td>
</tr>
<tr>
<td>GMAC Financial Services</td>
<td>USA</td>
<td>General Motors</td>
<td>Car manufacturer</td>
<td>No bank partner</td>
</tr>
<tr>
<td>Siemens Fin. Services</td>
<td>Germany</td>
<td>Siemens</td>
<td>Technology</td>
<td>No bank partner</td>
</tr>
<tr>
<td>Sony Bank</td>
<td>Japan</td>
<td>Sony</td>
<td>Technology</td>
<td>Sakura Bank, JP Morgan</td>
</tr>
<tr>
<td>Centro de Seguros y Servicios</td>
<td>Spain</td>
<td>El Corte Inglés</td>
<td>Retailer</td>
<td>Hispamer</td>
</tr>
</tbody>
</table>

Table 2.4: Financial Market Non-Banking Competitors
(Source: González and Guerrero, 2004)
Internet banking not only intensifies competition, it also enables customers to easily compare the terms and conditions of the financial products or services offered by different banks (Rogerson et al., 1999). This ‘frictionless commerce’ tends to raise customers’ expectations about services and products and could lead to dissatisfaction and make these customers more prone to switching to other service providers (Shankar et al., 2002). However, economic, social and psychological risks may come into play whenever customers switch banks (Bendapudi and Berry, 1997). The economic risk refers to financial penalties, search and transaction costs, learning costs and the loss of loyal-customer discounts. The social risk means habit change, and the psychological risk involves emotional bonds and cognitive efforts. In short, time, money and effort are the costs of switching banks (Fornell, 1992).

The risks for banks using Internet banking include the removal of the entry barrier into the retail banking sector for competitors (Howcroft and Kiely, 1995), the removal of geographical boundaries - especially in remote areas - for market penetration (Evans and Wurster, 1997), an increase in competition and the reduction of profits owing to little products differentiation (Heinen, 1996). In order to minimize risks and maximize opportunities, banks should retain customers in the virtual place so as to gain profit from offering Internet banking. The success of banks operating via the Internet depends on how well they attract and keep customers (Wah, 1999). One opinion is that Internet banking also strengthens the relationship between banks and their customers since Internet banking facilitates banking directly to home or office of the customers, and these characteristics, services 24 hours a day, 7 days a week, help to maintain customer retention (Robinson, 2000). Section 2.3 presents various aspects of customer retention.
2.3 Customer Retention

2.3.1 Concepts of Customer Retention

Customer retention has been conceptualized as a dimension of a customer loyalty construct (Boulding, Kalbra, Staeling & Zeithaml, 1993; Zeithaml, Berry & Parasuraman, 1996). Indeed, the terms ‘customer retention’ and ‘customer loyalty’ are often used interchangeably in literature. However, customer retention and customer loyalty are not surrogates for each other because the two terms can refer to different things. Therefore it is suggested that the conceptualization of customer retention needs further clarification (Hennig-Thurau and Klee, 1997).

‘Customer retention’ is concerned with repeated patronage, which is closely related to repeat-purchasing behaviour and brand loyalty (Jacoby and Chestnut, 1978). ‘Brand loyalty’ contains attitudinal aspects whereas customer loyalty contains both attitudinal and behavioural aspects. Customer retention only focuses on developing marketing strategies that cause repeat-purchasing behaviour and ignores factors that influence such behaviour (Hennig-Thurau and Klee, 1997).

2.3.2 Impacts of Customer Retention on Profitability

Numerous studies report that firms in an intensively competitive market realize that their most valuable asset is their existing customer base (Colgate, Stewart & Kinsella, 1996; Heskett, Sasser & Schlesinger, 1997; Woodruff, 1997; Mols, 1998; Paulin, Perrien, Ferguson, Salazar & Seruya, 1998; Athanassopoulos, 2000; Jones et al., 2000; Thomas,
Other studies reveal that long-term customer relationships are desirable because they are more profitable for firms (Buchanan and Gilles, 1990; Reichheld and Sasser, 1990; Fornell, 1992). One estimate is that the cost of recruiting a new customer to a product or service is around six times higher than that of retaining an existing one (Anonymous, 1997). Increased customer retention leads to additional sales, lower costs, price raise acceptance and no cost word of mouth recommendations (Reichheld and Schefter, 2000).

However, the assertion that loyal customers are more profitable is over-simplified. The assumption that the costs involved in serving loyal customers are lower, that loyal customers pay higher prices, and that loyal customers spend more money than disloyal ones with a firm has been met with scepticism (Dowling and Uncle, 1997). The argument is supported by the statement that long-term customers expect value-added relationships in order to purchase more, otherwise, they spend less (Mohs, 1999). In contrast, short-term customers might not have any expectations of value-added relationships from the firm, so nothing stops them from buying. The finding in a case study at AT&T revealed that no differences regarding spending were spotted between long-term and short-term customers (Reinhartz and Kumar, 2000).

Apart from the little empirical evidence on negative lifetime-profitability relationship, reservation is still made that the majority of life-time relationship outcomes will be positive along the diagonal line, as shown in Figure 2.5.
2.3.3 Relationship between Customer Retention and Profitability in Banks

One customer does not necessarily generate the same revenue and, ultimately over time, profit for businesses as another customer (Petro, 1990; Cooper and Kaplan, 1991; Peppers and Rogers, 1993; Slywotzky and Shapiro, 1993; Wang and Spiegel, 1994; Wayland and Cole, 1997). There was an estimate that in retail banking, between 50 and 60 percent of customers are unprofitable (Storbacka et al., 1994). An empirical study of the customers of a New Zealand bank revealed that one third of its customers were unprofitable, one third barely broke even and the remaining one third accounted for 98 percent of its profit (Garland, 2002). However, the challenge for banks is how to identify their profitable customers, that is, those with large financial portfolios (Walsh, 1983).

In established economies, market segmentation in the financial services sector is a common practice (Speed and Smith, 1991; Harrison, 1994). Treating all customers equally regardless of the value they generate to the firm is uneconomical. New Zealand
banks are gearing low-profitability customers to cheaper delivery systems and adjusting their customer-service levels accordingly (Garland, 2005). The non-branch bank ING Direct closes between three and four percent of its customer accounts on a monthly basis because these customers require too much personal service (Nickson, 2001). To outperform competitors, banks should make customer segments and profitability analysis their marketing focus (Donner and Dudley, 1996).

A five percent improvement in customer loyalty has been found to generate an increase of between 35 and 95 percent in the lifetime value of a customer (Reichheld, 1996). As shown in Figure 2.6, this increase is noticeable in the financial sectors of life insurance (90%), banking (85%) and general insurance (84%).

Figure 2.6: The Effect of a Five-Percent Retention Increase on Customer Value
(Source: Reichheld, 1996)
Figure 2.6 shows that the magnitude of any increase depends on, among other factors, the business nature of an industry. In banking, the initial costs are high and sales per customer increase sharply after a few years, so banks should actively build relationships with profitable customers (Shapiro et al., 1987; Slywotzky and Shapiro, 1993; Jones and Sasser, 1995). Furthermore, another finding revealed that different retention strategies fit for different business models (Wirtz and Lihotzky, 2003).

2.3.4 Profile of Profitable Bank Customers

Despite the need to capture profitable customers, the benefit segmentation in the financial service sector was rarely studied before the mid-nineties (Minhas and Jacobs, 1996). The typical Internet banking users of today are identified as young, highly educated, relatively wealthy, having good computer skills and with a knowledge of the Internet. They are also likely to belong to the upper or professional classes (Spiegel et al., 1996; Locarek-Junge and Swaiger, 1998; Sathye, 1999; Jayawardhena and Foley 2000; Mattila, 2001; Karjaluoto et al., 2002). Three reasons have been suggested as to why customers in this segment are profitable and less risky for banks:

1. The aggregate cash flow leads to economies of scale. As the number of high-net-worth accounts is comparatively low, a large turnover and a low administrative workload for banks can be achieved.

2. This segment represents longer relationships, because customers in this segment are relatively young.

3. Since this segment is likely to be mobile, the Internet banking mode fits their banking needs irrespective of geographical boundaries (Jayawardhena and Foley, 2000).
It has been cited that the uptake of electronic banking, including Internet banking, is likely among people with higher levels of financial assets and education (Kolodinsky, Hogarth & Shue, 2000). Commercial banks are currently developing strategies to attract affluent customers with a net worth exceeding US$1 million (Stanley, 1984). These customers tend to be loyal to their financial institutions and are likely to be from the senior corporate executive, self-employed business person and professional levels (Stanley, 1984). Interviews conducted by JP Morgan in the United States revealed that people between the ages of 18 and 49 with a household income in the US$41,000-US$59,000 or above range display great interest in Internet banking whereas people over 65 show very little interest in Internet banking (BAI, 2003). Figure 2.7 shows the different demographic segments interested in Internet banking.

Figure 2.7: Interest in Internet Banking by Segments
(Source: BAI, 2003)
In the United States, many highly skilled professionals have been either starting their own businesses or consulting for their former corporate employers. This shift in careers is partly driven by fundamental changes whereby US companies do business in a better, faster, more creatively and cost-saving way than previously (Jahrig, 1995). This leads to such major lifestyle shifts as moving from a big city to a small town, equipping one’s home as an office and employing the internet to accomplish shopping and banking needs (Levinson and Orloff, 2003). In a study of the profiles of users of online banking services in the EU, older individuals in leading positions were identified as likely to use Internet banking (Guerrero, Egea & González, 2005). One study in Finland reported that more than 30 percent of wealthy and well-educated mature males use e-banking as their primary method of making payments (Mittila, Karjaluoto & Pento, 2003).

In today’s Hong Kong, professionals and business executives routinely work around the clock seven days a week. They often have to travel, carrying their laptops, for business whenever necessary. Constantly juggling work with family life seems to be their way of life. To these ‘cash-rich but time-poor’ computer-savvy business practitioners and professionals, performing their banking business with the click of a mouse anytime and anywhere seems to be the perfect solution to help them manage their money (Hagel et al., 1997). Statistics show that the two occupation categories of ‘managers and administrators’ and ‘professionals and associate Professionals’ in Hong Kong comprise 31.5 percent of the administrative region’s working population (Hong Kong Annual Digest of Statistics, 2006a). Of all occupations, these people earn the most money (Hong Kong Annual Digest of Statistics, 2006b). Logically, these professionals and business practitioners are the potentially profitable customers for Hong Kong banks and should be target customers for retention.
2.4 Factors Affecting Customer Retention

Once they have identified the profitable customers, bank management has to find out what make these profitable customers stay. Factors affecting customer retention need to be confirmed and applied. However, factors affecting customer retention are diverse. Table 2.5 lists the different factors influencing customer retention quoted by scholars.

<table>
<thead>
<tr>
<th>Factors Affecting Customer Retention</th>
<th>Scholarly Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market orientation</td>
<td>Narver and Slater, 1990</td>
</tr>
<tr>
<td>Client Expectation, Perceived Risk and Need to Control</td>
<td>File and Prince, 1994</td>
</tr>
<tr>
<td>First Service Encounter</td>
<td>Bitner, 1995</td>
</tr>
<tr>
<td>Transaction, Social and Structural Bonds</td>
<td>Berry, 1995</td>
</tr>
<tr>
<td>Product and Service Quality Perception</td>
<td>Reichheld and Sasser, 1990</td>
</tr>
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<td></td>
<td>Oliver, Oliver &amp; Lan, 1992</td>
</tr>
<tr>
<td></td>
<td>Hennig-Thurau and Klee, 1997</td>
</tr>
<tr>
<td></td>
<td>Sirohi et al., 1998</td>
</tr>
<tr>
<td>Trust and Commitment</td>
<td>Garbarino and Johnson, 1999</td>
</tr>
<tr>
<td>Involvement</td>
<td>Silos, 1999</td>
</tr>
<tr>
<td>Alternative Attractiveness</td>
<td>Bansal and Taylor, 1999</td>
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<td></td>
<td>Dube and Shoemaker, 2000</td>
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<td></td>
<td>Jones et al., 2000</td>
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<td></td>
<td>Sharma and Patterson, 2000</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>Rust and Zahorik, 1993</td>
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<tr>
<td></td>
<td>Kotler, 1994</td>
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<td></td>
<td>Lee, Lee &amp; Feick, 2001</td>
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<td></td>
<td>Ranaweera and Prabhu, 2003a</td>
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<tr>
<td>Switching Costs</td>
<td>Lee et al., 2001</td>
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<tr>
<td></td>
<td>Ranaweera and Prabhu, 2003a</td>
</tr>
</tbody>
</table>

Table 2.5: Factors Affecting Customer Retention
2.4.1 Customer Satisfaction

Of the above factors, customer satisfaction has long been recognized in marketing theory and practice as both a core concept and the main goal of business activities (Yi, 1990; Anderson, Fornell & Lehmann, 1994). Marketers take customer satisfaction as a significant determinant of positive word-of-mouth consumer loyalty and repeat purchase (Yi, 1990; Anderson and Sullivan, 1993; Rust and Zahorik, 1993; Rucci et al., 1998; Bansel and Taylor, 1999; Cronin et al., 2000; Kotler et al., 2002; Ranaweera and Prabhu, 2003). Satisfaction is also important to consumers because it represents a positive outcome for the money spent to fulfill their needs (Day and Landon, 1977).

2.4.1.1 Concepts of Customer Satisfaction

Satisfaction is broadly dedicated to part of the confirmation or disconfirmation paradigm (Oliver and Svan, 1989). Satisfaction is defined as a post-choice evaluative judgement in reference to a specific and purposeful decision (Oliver, 1997). It is also described as ‘pleasurable fulfilment’ (Oliver, 1999). Consumer satisfaction is acknowledged as a consumer’s subjective evaluation of the outcomes and experiences associated with consuming or using the product or service (Hunt, 1977).

The above view is controversial to emerging studies that suggest affections contribute to the explanation and prediction of customer satisfaction (Fornell and Wernerfelt, 1987; Homburg and Giering, 2001). It has been argued that: (1) satisfaction is based on a customer’s cumulative experiences rather than being a transaction-specific phenomenon (Anderson et al., 1994; Bayus, 1992), and that (2) conceptualising satisfaction with a single transaction is too restrictive (Homburg and Giering, 2001).
The concept of transaction-specific satisfaction is criticised as it comes from the performance on specific attributes of the particular service encounter and provides short-term knowledge of a customer’s satisfaction with products or services (Oliver, 1993; Anderson et al., 1994). Overall or cumulative satisfaction, on the other hand, is gathered from factors occurring through the transaction process (Bitner and Hubbert 1994; Oliver, 1997). This concept is more fundamental and useful when compared with transaction-specific customer satisfaction in predicting the subsequent behaviours of a consumer and the performance of a firm (Fornell, 1992; Anderson et al., 1994).

Three types of customer satisfaction construct have been identified, namely emotional state, evaluative judgment and a combination of both components. With emotional state, customer satisfaction is viewed as an emotional response to the experiences customers encounter with the products or services consumed (Day, 1983; Woodruff, Cadotte & Jenkins, 1983; Swan, 1988). With evaluative judgement, customer satisfaction can be viewed as an overall evaluative response rendered from the supposition of the purchase experience. Therefore, this is not an emotional state but the evaluation of an emotion (Czepiel, Rosenberg & Akerele, 1974; Hunt, 1977; Engel and Blackwell, 1982). For the third type, the combination of both of the other two constructs, customer satisfaction can be viewed as the incorporation of an emotional state and an evaluative judgement. This construct is taken as an evaluative response related to the perceived outcomes of customer experience during the course of acquisition, consumption and disposition of the purchase (Miller, 1977; Westbrook and Oliver, 1981). It has been reported that customers will develop positive associations with the use of a website and will report more positive affect toward a web vendor if they experience positive emotions (Oliver, 1999). Section 2.4.1.2 presents the relationship between customer satisfaction and customer retention in various business contexts.
2.4.1.2 Relationship between Customer Satisfaction and Customer Retention

Many published works consistently cite customer satisfaction as an important antecedent of customer retention (Rust and Zahorik, 1993). Customer satisfaction is regarded as the key to customer retention (Kotler, 1994) and has been taken as a fundamental determinant of long-term customer behaviour and customer retention (Oliver, 1980; Yi, 1990).

Customer satisfaction has a significant impact on repurchase intentions in a range of services (Cronin and Taylor, 1992; Patterson, Johnson & Spreng, 1997). The statement “investing in customer satisfaction is like taking out an insurance policy. If some temporary hardship befalls the firm, customers will be more likely to remain loyal” (Anderson and Sullivan, 1993, p.160) is endorsed by another statement that: “The key to customer retention is customer satisfaction” (Kotler, 1994, p. 20).

Satisfying customer needs and wants ensures repeat purchase (Kotler et al., 2002). One empirical study has proved that a reduction in defections by five percent can raise profitability by between 20 and 85 percent (Reichheld and Sasser, 1990). Another study contends that the same rules of customer life-cycle economics in such e-commerce sectors as online book selling, groceries and consumer electronics, apply both online and offline (Reichheld and Schefter, 2000). In fact, the success of online companies relies on their high ratio of repeat sales (Gefen, 2002). Amazon.com, for example, has 66 percent of its sales generated by repeat purchases (The Economist, 2000).

Empirical studies, however demonstrate a different picture. A study of car buyers conducted in the 1980s revealed that only 40 percent of satisfied customers intended to buy again from the same dealer as opposed to 15 percent of unsatisfied customers
intending to buy again from the same dealer (Kordick, 1988). A later large-scale study of
customer satisfaction conducted by the Xerox firm also found that the relationship
between customer satisfaction and customer retention was just weakly related (Heskett
and Schlesinger, 1994). Figure 2.8 depicts the relationship between customer satisfaction
and customer retention in the study.

Figure 2.8: Relationship between Customer Satisfaction and Customer Retention
(Source: Heskett and Schlesinger, 1994)

The three zones in Figure 2.8 represent the relationship between customer satisfaction
and customer retention. The ‘zone of defection’ comprises customers who are dissatisfied,
those who are neutral, and those who are loyal but have had a negative experience with
the service.
The ‘zone of indifference’ comprises customers who may be satisfied but show no loyalty. This group of customers is expensive to recruit and difficult to keep because they consistently look for a low lower price.

The ‘zone of loyalty’ includes customers who have confidence and are likely to repurchase whenever an opportunity presents itself. Many of this last group become loyal after they have been treated properly when things go wrong. Figure 2.8 also illustrates that even when customers rate their satisfaction at the scale of 4 (i.e. satisfied), there is a high level of indifference and a possibility of defection if a better alternative is perceived and provided (Heskett and Schlesinger, 1994). Furthermore, an experimental study found that there was no important relationship between the transaction-specific satisfaction appraisal and the length of the retention (Bolton, 1995).

The findings of these studies show that there may be a need to review the conceptual thought of the strong relationship between customer satisfaction and retention. Indeed, literature on the relationship between customers’ overall satisfaction and their repurchase intentions are controversial (Oliva et al., 1992; Brown, Churchill & Peter, 1993; Oliva, Oliver & Bearden, 1995; Mitall, Rose & Baldasare, 1998). Some researchers assume that the relationships between customer satisfaction and repurchase intentions are symmetrical and linear (LaTour and Peat, 1979; Kolter et al., 2002). This means that customer satisfaction has a direct impact on repurchase intentions (Brown et al., 1993; Mitall et al., 1998). Other researchers, however, assume that the relationships between customer satisfaction and repurchase intentions are asymmetrical and nonlinear (Oliva et al., 1995). That means that customer satisfaction has no direct impact on repurchase intentions. The conclusion is that the probability of repurchase is not isomorphic with either positive or negative consumption experience (Feinberg, Widdows, Hirsch-Wyncott & Trappey, 1990).
In fact, satisfaction alone will not cause repeat purchase if competition is keen. It actually requires the customers’ resistance to change to defy offers from competitors (Jansson and Letmark, 2005). That is when there are few options to choose from, customers remain loyal even though they may be dissatisfied. On the other hand, highly satisfied customers may be disloyal if there are many choices available. Accumulated evidence indicates customer satisfaction does influence repurchase behaviour, but this evidence explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). Satisfied customers may leave a relationship and dissatisfied customers do not necessarily switch to another bank (Reichheld, 1993) especially in the Internet business mode. Firms need to go beyond mere satisfaction to retain customers in a competitive business environment (Morgan and Hunt, 1994; Bendapudi and Berry, 1997; Hart and Johnson, 1999) such as banking.

2.4.2 Customer Commitment

Customer commitment has in many cases been identified as a crucial variable in the literature of relationship marketing (Dwyer, Schurr & On, 1987; Crosby, Evans & Cowles, 1990; Cronin and Taylor, 1992; Moorman, Deshpandé & Zaltman, 1993; Morgan and Hunt, 1994; Storbacka et al., 1994; Sheaves and Barnes, 1996). The term ‘relationship marketing’ first appeared in a 1983 conference paper (Berry, 1983). Relationship commitment ensures the strength, stability, durability and even the profitability of a relationship (Dwyer et al., 1987; Morgan and Hunt, 1994, Wilson et al., 1995). Customer commitment is defined as “all marketing activities directed toward establishing, developing, and maintaining successful relational exchange” (Morgan and Hunt, 1994, p.22).
2.4.2.1 Concepts of Customer Commitment

As a management concept, relationship marketing describes a marketer’s view of how to keep customers for life (Vavra, 1995). Commitment is the core concept in the relationship-marketing paradigm (Dwyer et al., 1987; Morgan and Hunt, 1994; Wetzels, de Ruyter & Lemmink, 2000) and it is an enduring attachment to a seller (Morgan and Hunt, 1994).

Scholarly literature views the work of relationship marketing in the consumer market in three very different ways. The enthusiastic stream, for instance, supports the use of relational marketing strategy for all firms regardless of products or services (Peppers and Rogers, 1997). The opposing stream protests that relational strategies are unsuitable and costly in an industry such as consumer retailing. One source contends that consumers have to be pretty naive for relational strategy to be successful (Egan, 1999). The middle ground bears the view that different relationship proneness exists among different groups of customers in different industries (Christy, Oliver & Penn, 1996).

In the literature, however, the interpretation of commitment is not unanimous when referring to its attitudinal and behavioural nature (Meyer and Allen, 1997). Moreover, commitment has been taken as unidimensional (Garbarino and Johnson, 1999; Sharma and Patterson, 2000; Hennig-Thurau, Gwinner & Gremeler, 2002). This view stands in contrast to viewing it as a multidimensional construct, though mostly applied to a business to business setting (Gruen et al., 2000; Wetzels et al., 2000). Therefore, it can be interpreted that the unidimensional view is referring to a customer to business context.
Despite the different views on commitment in the literature, most views support three dimensions of commitment regardless of the subject being studied (Meyer and Herscovitch, 2001). The three dimensions of commitment reflect different underlying psychological states, namely, affective commitment, continuance commitment and normative commitment. Affective commitment refers to the desire and willingness to stay with an organization. It is also found to be positively related to repurchase intentions (Fullerton, 2005). Continuance commitment is bound by the tangible and intangible costs to stay with the organization. Normative commitment is the feeling of obligation to stay with an organization (Meyer and Allen, 1997).

According to the Theory of Reasoned Action (TRA), a person’s intention is determined by personal nature and the social influence (Fishbein and Ajzen, 1975). The personal factor is the individual’s positive or negative evaluation of performing the behaviour. This factor is known as attitude toward the behaviour, and it refers simply to the person’s internal judgment. This judgment may be based on one’s past experience, belief, educational background, understanding and character. These personal belief and subjective norms make up a person’s intention and its subsequent behavioural action. The TRA model posits that commitment, an attitude toward a retailer, is a direct antecedent to loyalty. Once loyalty is solidified, consumers will resist persuasion to switch to or ignore information about goods or services from alternate, more inexpensive sources (Oliver, 1999).

However, the TRA model posits that Internet trustworthiness, security beliefs, will negatively moderate the relationship between the commitment and loyalty link. The influence of commitment on loyalty and consequently repeat patronage may be moderated by situational or social factors (Dick and Basu, 1994). Actual or perceived scenarios that affect a consumer’s motivation to purchase goods or services from a vendor
could be moderators. One of the important moderators being identified is security beliefs, which reflect perceptions of safety or trust in the environment surrounding a transaction. This may cause inconsistency in the relationship between commitment and loyalty. That is, if an environment is unsafe or untrustworthy, committed customers will express less loyalty to the business (Hoffman, Novak & Peralta, 1998). The relationship between customer commitment and customer retention will be discussed in Section 2.4.2.2.

2.4.2.2 Relationship between Customer Commitment and Customer Retention

“Relationships are built on the foundation of mutual commitment” (Berry and Parasuraman, 1991, p.139). Commitment implies that there are mutual benefits and that the parties involved want to stay in the relationship and are prepared to put in effort and investments in terms of monetary and psychological in maintaining the relationship (Morgan and Hunt, 1994). Customers tend to commit themselves to establishing, developing, and maintaining relationships with a service provider who offers value-added benefits. These benefits can be classified as confidence, social and favourable treatment (Gwinner et al., 1998). Even though some customers perceive the core service attribute as less than optimal, they may still stay in a relationship if they are receiving desirable relational benefits (Gwinner et al., 1998).

Service providers implementing effective relationship-specific investments can increase customers’ dependency, thus inhibiting switching (Berry and Parasuraman, 1991). It has been reported that power-utility suppliers are bound to commitment and trust in a restructured environment in order to ward off customer switching (DuPont, 1998). In addition, a customer who switches to a competitor tend to lose the benefits from investments that may not be readily provided by the competitor. Switching cost is
conceptualized as the perception of the magnitude of the additional costs required to terminate the current relationship and secure an alternative (Porter, 1980). The cost of either switching or termination has been identified as a factor contributing to maintaining a relationship (Morgan and Hunt, 1994).

Customers are believed to be more involved in a relationship if they engage in more information processing. Since personal contact can create more involvement, there is a need to increase the amount or level of human touch in order to create loyalty or commitment (Bendapudi and Berry, 1997; Bhattacharya and Bolton, 2000). Consumers play a passive role in the relationship may be due to the lack of opportunities to being active, for example, limited choice of products and services (Pels, 1999).

Marketers assume that customers are motivated by reward or greed, philanthropy or guilt and love or obligation (Seybold, 2001). The assumption that memberships automatically bring high repeat patronage and loyalty is kept by cash incentives being offered (Javalgi and Moberg, 1997). Moreover, consumers seem to have intense relationships with physical products and emotional experiences even without human contact. Exposure to advertising is one example of this (Fournier, 1998).

For intangible services, customers tend to stay in a relationship with the same service provider if they have established a high level of affective commitment to the service employees of that provider (Shernwell, Cronin & Bullard, 1994; Hansen, Sandvik & Selnes, 2003). Furthermore, clients will be committed to their financial advisers in order to obtain maximum returns on their investments (Sharma, Patterson, Cicic & Dawes, 1997). Clients do not actively look for alternative relationships if they are committed to a relationship.
In general, firms rely on trust and commitment to maintain long-term relationships with customers. In high-commitment relationships, an occasional defect in the overall quality may not pose a threat to the whole relationship. On the contrary, in a relationship based on a high level of overall quality, it is more likely that such an incident may trigger a customer’s decision to terminate the relationship (Hennig-Thurau and Klee, 1997).

One empirical study suggests that strong interpersonal relationships positively influence a customer’s intention to repurchase in the case of low-customer satisfaction (Jones et al., 2000). The implication is that satisfaction is a condition that contributes to a customer’s opting for a product or service but satisfaction alone is not sufficient to make a customer commit to the product or service (Wilson and Mummelaneni, 1990). Even a satisfied customer may leave a relationship and a dissatisfied customer may not necessarily switch to competitors (Reichheld, 1993).

On the other hand, customer relationship management (CRM) applications are found to result in improvements in customer knowledge and customer satisfaction (Mithas, Krishnan & Fornell, 2005). When Scandinavia’s largest business publisher, Dagbladet Borsen, implemented its 4-year CRM strategy, its circulation increased 40 percent, advertising revenue increased 50 percent, and its overall revenue more than doubled (Lindgreen, 2004). The concept of commitment and the connection between service quality and customer commitment is not straightforward. Commitment in a business relationship goes beyond satisfaction, and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson et al., 1995).
2.4.3 Trust

Research into trust concept originated with the analysis of personal relationships. For instance, in the area of social psychology, trust can be regarded as an inherent characteristic of any valuable social interaction (Rempel et al., 1985). In addition, the concept of trust, inspired by sociology (Lewis and Weigert, 1985), economics (Dasgupta, 1988) and management (Darney and Hansen, 1994), came into marketing literature following the relational orientation arising in marketing activities (Morgan and Hunt, 1994; Dywer et al., 1987; Ganesan, 1994; Geyskens, Steenkamp, Scheer & Kumar, 1996).

In sociology research, the emotional element of trust is highlighted whereas in marketing (Lewis and Weigert, 1985), trust is described as three-pronged: (1) Trust possesses a cognitive process - logical rational reasoning; (2) an emotional element - positive influence for the trustee and, (3) behavioural enactment - the undertaking of a risky course of action based on the expectation with confidence that all parties involved in the action will respond competently and dutifully (Moorman et al., 1993).

Previous research has emphasized cognitive trust and neglected the emotional element while focussing on the impact of awareness of the known on customer trust but overlooking the impact of awareness of the unknown (Komiak and Benbasat, 2004). Awareness of the unknown means a customer does not know everything about a trustee (Simmel, 1964). As we say ‘the unknown is daunting’, the impact of awareness of the unknown, as well as emotional trust, on customer trust is influential in e-commerce and deserves to be studied (Komiak and Benbasat, 2004). Cognitive trust and emotional trust has potentially asymmetric effects on customer reliance on entities in e-commerce (Komiak and Benbasat, 2004).
As a core component of service and relationship quality, trust has been recognised in both academia and business (Clout, 2001; Coulter and Coulter, 2002). ‘Trust-worthiness’ in various presentations has been created as the main message in commercial advertisements, e.g. “Don’t trust your luck, trust RAA Plus”\(^1\) and “Trust is Tampax”.

### 2.4.3.1 Concepts of Trust

Terminology for ‘trust’ is varied, even confusing, when referring to someone or something being trusted. In the literature of the social sciences and psychology, such terms as ‘altruism’ (Frost, Stimpson & Maughan, 1978), ‘benevolence’ and ‘honesty’ (Larzelere and Huston, 1980) or ‘dependability’ and ‘responsibility’ (Rempel, Homes & Zanna, 1985) are used to describe trust. Nevertheless, these terms share the same idea that trust in an individual is a feeling of security based on the belief that the individual’s behaviour will result in favourable outcomes for the exchange or relational partner (Delgado-Ballester, 2004).

Definitions of the trust construct range from ‘a generalised expectancy held by an individual that the word of another can be relied on’ (Rotter, 1967) to ‘the extent to which a person is confident in - and willing to act on - the basis of the words, actions, decisions of others’ (McAllister, 1995). In the consumer-brand domain, trust is described as the willingness of the consumers to rely on the capability of the brand to act on the promises it has claimed to fulfil (Chaudhuri and Holbrook, 2001). However, it is arguable to incorporate the behavioural intention of ‘willingness’ into the definition (Singh and Sirdeshmukh, 2000) as it is implied in the consumer’s confidence with the brand (Morgan and Hunt, 1994).

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\(^1\) RAA = Royal Automobile Association
This feeling about trust is built on the two dimensions of brand reliability (Hess, 1995) and brand intention (Delgado-Ballester and Munuera-Alemán, 2002). ‘Brand reliability’ assumes that the brand is able to respond to customers’ needs by offering new products or services that customers may need or by offering a constant quality level of its products or services. However, it is arguable that the brand could be regarded as an active relationship partner responding to customers similar to people (Delgado-Ballester, 2004). Despite this scepticism, this dimension implies that the brand is a promise of future performance (Deighton, 1992) that will lead to an increase of brand-repurchase intentions by customers.

‘Brand intention’ refers to a belief that goes beyond the present evidence and experience with an assurance of making customers feel that the brand will be responsible when problems arise in the future regarding the consumption of the product or service. Brand intention is more affective and emotional in nature than the other dimensions (Michell, Reast & Lynch, 1998). Indeed, in the context of consumption, customers are subject to the vulnerability of the company’s decisions and actions. This dimension infers that the brand will not take advantage of the customers’ vulnerability in case of adverse situations and circumstances (Delgado-Ballester, 2004).

Moreover, trust in marketing studies has been reported as ‘multidimensional’ (Raimondo, 2000), and has been described as:

- involved in brand extension acceptance as part of ‘brand credibility’ (Keller and Aaker, 1992);
- claimed to be the basis of the development of loyalty (Berry, 1993; Reicheld and Schefter, 2000);
• a component of brand equity (Dyson, Farr & Hollis, 1996);
• critical in sustaining good agency-client relationships (Labahn and Kohli, 1997);
• crucial in establishing strong customer relationships on the Internet (Urban, Sultan & Qualls, 2000), and
• possibly the most powerful relationship marketing tool for firms (Berry, 1995).

Trust develops through past experience and prior interaction over time (Rempel et al., 1985; Grönroos, 1996; Curran, Rosen & Surpremant, 1998). However, ‘trust’ remains a term until perceived risks determine its effect (Andaleeb, 1992; Mayer, Davis & Schoorman, 1995; Rempel et al., 1985). That is to say consumers are vulnerable about any purchase, and whenever the purchasing decision is important to them, they will look for a trustworthy brand to eliminate the intrinsic risks (Delgado-Ballester and Munuera-Aleman, 2001). Therefore, trust has been interpreted as a psychological state termed as ‘perceived probabilities’ (Bhattacharya, Devinney & Pillutla, 1998), ‘confidence’ (Barney and Hansen, 1994; Garbarino and Johnson, 1999) or ‘expectations’ (Gambetta, 1988; Rempel et al., 1985) prescribed to positive and favourable outcomes enacted on the part of the trusting party.

2.4.3.2 Relationship between Trust and Customer Retention

While web-mediated e-commerce changes the pattern of consumer behaviours, customer trust continues to be important in the e-commerce context. Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Adapted from the definitions in conventional commerce, customer trust in e-commerce has been variously defined as:
• ‘a willingness to take risk’ (Lee and Turban, 2001; Ba and Pavlou, 2002),
• ‘a willingness to believe the trustee’ (Fung and Lee, 1999), or
• ‘a belief concerning certain characteristics of the trustee’ (Stewart, 1999).

However, there are differences in the two modes of business. The direct objects of trust are different, and the situation within which that customer trust operates, such as the information available for customers about the objects of trust, is not the same.

Online purchases depend on customer trust in the Internet, in specific websites, in the information available online, and in a firm’s delivery and service fulfilment (Urban et al., 2000). Trust in a firm’s website affects customers’ attitude towards the firm and their willingness to buy (Keen, 1997; Wetsch and Cunningham, 1999). An absence of customer trust in an online firm’s competence and integrity is the major hurdle to the enjoyment of e-commerce benefits (Keen, 1997; Ratnasingham, 1998; Ba, Whinston & Zhang, 1999; Brynjolfsson and Smith, 2000). For repurchases, customer trust in a firm is the principal mediator between product or service attributes and customer retention (Garbarino and Johnson, 1999). Customer trust significantly contributes to sales growth through customer acquisition and retention. Repeat purchases are claimed to account for more than one-half of total revenue among high-end e-commerce websites (Intermarket Group, 2004).

In the financial services market, trust, together with honesty, fairness or excellence, has been taken as one of the basic consumer needs (Bayne, 1999). In the context of Internet banking, the absence of face-to-face contact creates a feeling of uncertainty and risk for customers (Reichheld and Schefter, 2000). Since customers might need reassurance to release their personal details and preferences, banks have to prove that they deserve to be trusted (Cappelli, 1999). The development and upkeep of trust in an online environment
is critically important, especially in such a highly unpredictable market with reduced product differentiation as banking (Fournier and Yao, 1997; Urban et al., 2000; Papadopoulou, Andreou, Kanellis & Martakos, 2001). Issues about privacy and security are major concerns for online shoppers, particularly unknown ones (Esch, Langner, Schmitt & Geus, 2006). It was reported that building customer trust and convenience is the most appropriate strategy for commerce-based businesses (Wirtz and Lihotzky, 2003).

2.4.4 Mediating Factors in the Relationship for Customer Retention

Trust generates associations and feelings that tend to be self-relevant and held with more certainty, and has been proposed that overall satisfaction generates trust (Ganesan, 1994; Selnes, 1998). Trust has been suggested as an antecedent to satisfaction (Singh and Sirdeshmukh, 2000). It has been hypothesized as an antecedent to commitment (Moorman et al., 1992; Morgan and Hunt, 1994). Trust being considered as an asset to a brand leads to customer loyalty (Ambler, 1999) and appears to be a key antecedent to loyalty (Chaudhuri and Holbrook, 2001; De Ruyter, Moorman, & Lemmink 2001; Fukuyama, 1995).

Trust has also been claimed to have a mediating role in the satisfaction-loyalty relationship (Hart and Johnson, 1999). Its fully mediating role for soft attributes and partially mediating role for hard attributes on loyalty has been reported (Auh, 2005). It has been cited that true customer loyalty is driven by a strong, trusting relationship between the customer and the business (Bhatty, Skinkle & Spalding, 2001) whereas commitment is found to mediate the relationships between trust and the propensity to leave (Morgan and Hunt, 1994). Commitment also mediates the relationship between repurchase intentions and various antecedent variables, including trust (Garbarino and
Johnson, 1999). Extant literature evaluation on customer satisfaction, customer commitment and trust on customer retention has posited problems for research on Internet banking, and these problems will be presented in Section 2.5.

2.5 Research Problems

Banks have been developing capabilities for providing Internet banking services for their new and existing customers for either competitive advantage or out of competitive necessity for survival (Karjaluoto et al., 2002). It has been reported that deregulation has caused previously loyal bank customers in Athens, Greece, to switch service providers (Mylonakis, Malliaris & Siomokos, 1998). Banks in Hong Kong look to the Internet to reduce their operational costs and to gain competitive advantages after the deregulation of interest rates in July 2001 (Hong Kong Monetary Authority, 2001a).

Although the main electronic delivery channel for banking today is the Internet (Karjaluoto et al., 2002), this channel possesses the following characteristics that can make it difficult for firms to retain their customers:

1. increased competition between banks (Chatterjee and Narasimhan, 1994; Makadok, 1998; Choudhury et al., 1998),

2. low differentiation (Dholakia and Rego, 1998), and commoditization of the market (Bakos, 1997).

Banks that offer the same services and products with little differentiation face a highly competitive environment (Bowen and Shoemaker, 1998). Competing on monetary return and product attribute alone may not be sufficient to retain customers (Cravens, 1995).
When referring to Internet banking, it has been predicted that the ‘frictionless commerce’ created by the Internet environment may raise bank customers’ expectations about services and make them less satisfied and more prone to switching to competitors (Shankar et al., 2002). The research problems being identified are how Internet banks keep their customers, especially the profitable ones and what makes them stay with the same service provider and what makes them go. These problems are presented into the following eleven research questions.

2.6 Research Questions

Derived from the research problems, eleven questions have arisen for Internet banking to see if the same factors - customer satisfaction, customer commitment and brand trust – have the same impact on retaining customers in the virtual context. The questions are listed below.

**Research Question 1:**

Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service?

**Research Question 2:**

Does the commitment of potentially profitable professionals and business practitioners have an effect on retaining the use of the Internet banking service of their bank?
Research Question 3:
Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they trust the service?

Research Question 4:
Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service and trust it?

Research Question 5:
Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service and are committed to it?

Research Question 6:
Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they trust the service and are committed to it?

Research Question 7:
Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service, trust it, and are committed to it?
Research Question 8:
How does trust in a bank affect the level of customer commitment to the service of that bank to make potentially profitable professionals and business practitioners retain internet accounts with that bank?

Research Question 9:
How does trust in a bank affect the level of customer satisfaction with the service of that bank to make the potentially profitable professionals and business practitioners retain internet accounts with that bank?

Research Question 10:
How does customer commitment to a bank affect the level of customer satisfaction with the service of that bank to make the potentially profitable professionals and business practitioners retain internet accounts with the bank?

Research Question 11:
How does commitment to a bank affect the level of customer satisfaction with the service and trust that bank to make the potentially profitable professionals and business practitioners retain internet accounts with the bank?

2.7 Hypotheses

Guided by the research questions, eleven specific hypotheses for this research have been developed and presented below regarding customer retention decisions made in the context of Internet banking
**HYPOTHESIS 1:**

Satisfaction increases customer retention has been cited (Oliver, 1980; Yi, 1990; Rust and Zahorik, 1993; Kotler, 1994). Customer satisfaction has a significant impact on repurchase intentions in a range of services (Cronin and Taylor, 1992; Patterson et al., 1997). Satisfying customer needs and wants ensures repeat purchase (Kotler et al., 2002). One empirical study has proved that a reduction in defections by five percent can raise profitability by between 20 and 85 percent (Reichheld and Sasser, 1990). Satisfying customer needs may be crucial to overcome customer reluctance to shop on the Internet (Bitner, Brown & Meuter, 2000). Therefore, when looking at the relationship between customer satisfaction and customer retention in the scope of Internet banking, we can formulate the following hypothesis:

**H1:** There is a positive relationship between customer satisfaction and customer retention in the context of Internet banking.

**HYPOTHESIS 2:**

Commitment is positively related to repurchase intentions (Fullerton, 2005). Commitment implies that there are mutual benefits and that the parties involved want to stay in the relationship and are prepared to put in both monetary and psychological effort and investments towards maintaining the relationship (Morgan and Hunt, 1994). Therefore, when looking at the relationship between customer commitment and customer retention in the scope of Internet banking, we can formulate the following hypothesis:

**H2:** There is a positive relationship between customer commitment and customer retention in the context of Internet banking.
HYPOTHESIS 3:
Trust increases customer retention and for repurchases, customer trust in a firm is the principal mediator between product or service attributes and customer retention (Garbarino and Johnson, 1999). Customer trust significantly contributes to sales growth through customer acquisition and retention (Intermarket Group, 2004). Therefore, when looking at the relationship between trust and customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H3: There is a positive relationship between trust and customer retention in the context of Internet banking.

HYPOTHESIS 4:
Customer satisfaction results in customer-behaviour patterns that are beneficial to business outcomes have been well recognized by both practitioners and academics (Keiningham, Perkins-Munn & Evans, 2003). Customer satisfaction has been defined as a customer’s overall evaluation of performance (Gustafsson, Johnson & Roos, 2005). A single satisfying transaction does not result in long term loyalty, nor does a single dissatisfying transaction lead to a customer switching. Therefore, for measuring satisfaction, a single item will be used for the overall level of satisfaction (Kettingler and Lee, 1994).

It has been proposed that overall satisfaction generates trust since trust generates associations and feelings that tend to be self-relevant and held with more certainty (Ganesan, 1994; Selnes, 1998). Therefore, when looking at the relationship between customer satisfaction and trust on customer retention in the scope of Internet banking, we can formulate the following hypothesis:
**H4:** Customer retention is the function of customer satisfaction and trust in the context of Internet banking.

**HYPOTHESIS 5:**
Studies have revealed that customer satisfaction has a measurable impact on purchase intentions (Bolton and Drew, 1991; Oliver, 1997; Anderson and Mittal, 2000; Estrin, 2005), customer retention (Anderson and Sullivan, 1993; Bolton, 1998; Mittal and Kamakura, 2001; Kumar, 2002; Estrin, 2005), and the financial performance of a bank (Rust and Zahorik, 1993; Leung, Li & Au, 1998; Anderson and Fornell, 1999; Keiningham, Goddard, Vavra & Iaci, 1999). As a result, customer satisfaction is taken as a basic construct for monitoring and controlling marketing activities in the concept of relationship marketing (Anderson et al., 1994; Fornell et al., 1996). It has been argued that commitment in a business relationship goes beyond satisfaction, and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson et al., 1995). Therefore, when looking at the relationship between customer commitment and satisfaction on customer retention in the scope of Internet banking, we can formulate the following hypothesis:

**H5:** Customer retention is the function of customer commitment and satisfaction in the context of Internet banking.

**HYPOTHESIS 6:**
Trust in a firm’s website affects customers’ attitude towards the firm and their willingness to buy (Keen, 1997; Wetsch and Cunningham, 1999). Online purchases depend on customer trust in the Internet, in the websites, in the information available, and in a firm’s delivery and service fulfilment (Urban et al., 2000).
Commitment, when extended to consumer setting, is conceptualised as a force that binds a customer to continue to the services of the same service provider (Meyer and Herscovitch, 2001) even despite irregular influential events and marketing efforts that may cause switching behaviours (Curasi and Kennedy, 2002). Therefore, when looking at the relationship between customer commitment and trust on customer retention in the scope of Internet banking, we can formulate the following hypothesis:

**H6:** Customer retention is the function of customer commitment and trust in the context of Internet banking.

**HYPOTHESIS 7:**
Repeat purchase depends on satisfying customer needs and wants (Kotler et al., 2002) whereas Customer Relationship Marketing (CRM) applications are found to be positively related to improvements in customer satisfaction (Mithas et al., 2005). In the context of consumption, customers are subject the vulnerability of the company’s decision and actions. This dimension infers that customers trust the company will not take advantage of their vulnerability in case of adverse situations and circumstances (Delgado-Ballester, 2004). While web-mediated e-commerce changes the pattern of consumer behaviours customer trust continues to be important in the e-commerce context. Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Therefore, when looking at the relationship between trust, customer satisfaction and commitment on customer retention in the scope of Internet banking, we can formulate the following hypothesis:

**H7:** Customer retention is the function of trust, customer satisfaction and commitment in the context of Internet banking.
HYPOTHESIS 8:
Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Adapted from the definitions in conventional commerce, customer trust in e-commerce has been defined as ‘a willingness to take risk’ (Lee and Turban, 2001; Ba and Pavlou, 2002), ‘a willingness to believe the trustee’ (Fung and Lee, 1999), or ‘a belief concerning certain characteristics of the trustee’ (Stewart, 1999). One empirical study has revealed that there is an indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000). Assuming that trust mediate the relationship between customer commitment and retention, specifically, customers with high level of trust are most likely to be retained. Therefore, it can be hypothesised that:

H8: Customer commitment is mediated by trust to build customer retention in the context of Internet banking.

HYPOTHESIS 9:
The relationship between satisfaction and customer retention has been empirically validated by many scholarly works studying the service sector (Anderson and Sullivan, 1993; Rucci et al., 1998; Bansal and Taylor, 1999; Cronin et al., 2000). However, trust has been suggested as an antecedent to satisfaction (Singh and Sirdeshmukh, 2000). It has been cited that the absence of customer trust in an online firm’s competence and integrity is the major hurdle to the enjoyment of e-commerce benefits (Keen, 1997; Ratnasingham, 1998; Ba, et al., 1999; Brynjolfsson and Smith, 2000). As there is an indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000). Trust mediates the relationship between customer satisfaction and retention is assumed, specifically, customers with high level of trust are most likely to be retained. Therefore, it can be hypothesised that:
**H9:** Customer satisfaction is mediated by trust to build customer retention in the context of Internet banking.

**HYPOTHESIS 10:**

Customer satisfaction has no direct impact on repurchase intentions (Feinberg et al., 1990). Mere satisfaction will not result in repeat purchases if competition is keen (Jansson and Letmark, 2005). Highly satisfied customers may be disloyal if there are many choices available. Accumulated evidence indicates that customer satisfaction does influence repurchase behaviour, but this evidence explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). Satisfied customers may leave a relationship and dissatisfied customers do not necessarily switch to another bank (Reichheld, 1993).

Customer commitment, on the other hand, has in many cases been identified as a crucial variable in the literature of relationship marketing (Dwyer et al., 1987; Crosby et al., 1990; Cronin and Taylor, 1992; Moorman et al., 1993; Morgan and Hunt, 1994; Storbacka et al., 1994; Sheaves and Barnes, 1996). Relationship commitment ensures the strength, stability, durability and even the profitability of a relationship (Dwyer et al., 1987; Morgan and Hunt, 1994, Wilson et al., 1995). Customer commitment mediates the relationship between customer satisfaction and retention is assumed, specifically, customers with high level of commitment are most likely to be retained. Therefore, it can be hypothesised that:

**H10:** Customer satisfaction is mediated by customer commitment to build customer retention in the context of Internet banking.
HYPOTHESIS 11:

Satisfaction is an essential, but not a necessary, condition for a customer to become committed to a product or service provider (Wilson and Mummalaneni, 1990). It has been suggested that service providers may not necessarily be able to retain satisfied customers (Heskett, Jones, Lowan, Sasser & Schlesinger, 1994; Schneider and Bowen, 1999). It has been proposed that affective, normative and continuance commitment mediates the relationship between switching intentions and antecedents such as satisfaction (Bettencourt, 1997, Wetzels, de Ruyter & van Birgelen, 1998; Garbarino and Johnson, 1999; Wetzels et al., 2000; Hennig-Thurau et al., 2002).

The empirically proven indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000) suggests that strong interpersonal relationships positively influence a customer’s intention to repurchase in the case of low customer satisfaction. If the inability to keep satisfied customers is partly due to the absence of customer commitment, then this suggests that commitment may act as a mediator to satisfaction in strengthening customer retention. In addition, trust has been claimed as having a mediating role for other variables in different research models. Trust is hypothesized as an antecedent to commitment (Moorman et al., 1992; Morgan and Hunt, 1994). Assuming customer satisfaction and trust mediate the relationship between customer commitment and retention, specifically, customers with high level of satisfaction and trust are most likely to be retained. Therefore, it can be hypothesised that:

H11: The effect of customer commitment on customer retention is mediated by customer satisfaction and trust in the context of Internet banking.
These eleven hypotheses are depicted in Section 2.8 as a conceptual model mapping the relationship between the various factors.

### 2.8 Research Model

A conceptual research model showing the hypothesized relationship that exists between various factors, customer satisfaction, customer commitment and brand trust on customer retention in the context of Internet banking, are shown in Figure 2.9. The relationship of the factors (variables) is mapped with the headed arrows indicating the direction of one factor (independent variable) to another (dependent variable), or one factor (independent variable) going through an intervening factor (mediating variable) to the other factor (dependent variable).

![Conceptual Research Model of This Study](image-url)

Figure 2.9: Conceptual Research Model of This Study
2.9 Conclusion

Banking has either developed, or been forced to change, from the fourteenth century through network branches to the Internet services of today. The use of the Internet banking is growing, thus confirming its acceptance all over the world. The electronic banking mode brings benefits to service users and creates opportunities for the service providers.

However, Internet banking also poses threats to the industry. It removes the industry entry barrier, crosses all geographical boundaries, and invites keen competition from banks and non-bank entities alike. Coupled with easy switching to a competitor from customers, banks are being challenged to find effective ways of retaining their customers in the virtual market place, especially profitable customers. Retaining profitable customers from the relevant segment is the basis of survival and the key to achieve profitability.

Extensive literature has been reviewed for factors leading to effective customer retention. Customer satisfaction, customer commitment and trust have been identified and empirically validated with their function in retaining customers in non-Internet contexts. The definition of the research problem is if the validated factors on customer retention will be as effective in an Internet context of banking. Research questions are then raised. The four variables, highlighted in eleven hypotheses, outlining expected relationships have been depicted in a research model as a blueprint to be tested for this study.
CHAPTER 3    RESEARCH METHODOLOGIES

3.1   Introduction

This chapter focuses on the research methodologies adopted for this research project. Section 3.1 introduces the different sections in the chapter. Section 3.2 presents the different research philosophies and paradigms and identifies which one this study falls into. Section 3.3 discusses the different research methods leading to the research design of this study. Section 3.4 analyses various measuring scales and identifies the key variables of this study. Section 3.5 highlights the significance of validity and reliability in research. Section 3.6 defines the research population and describes the sampling design for this study. Section 3.7 evaluates different data collection methods for the choice of a questionnaire for this study, as well as elaborating on the design of the questionnaire. Section 3.8 discusses the various ethical issues involve in data collection. Section 3.9 assesses different data analysis techniques and selects the tests for the raw data of this survey. Section 3.10 explains the limitations of the survey. Section 3.11 summarizes the entire chapter on research methodology.

3.2   Research Philosophies and Paradigms

A well-defined research objective can give a researcher a clear direction in which to design his/her research. The purpose of any study determines the types of research to follow since different researches demand different types of planning and handling (Ghauri, Grønhaug & Kristianslund, 1995). Research methods relate not only to
differences in problem structure but also to differences in philosophy of science and perspective held by the researcher (Ghauri et al., 1995). The three major research philosophies identified as underpinning business researches are: positivist research, interpretive research and critical research (Gephart, 1999; Lincoln and Guba, 2000; Cavana, Delahaye & Sekaran, 2001).

3.2.1 **Positivist Research**

Positivist research assumes that people share the same meaning systems and uses precise and objective measures to collect and reveal quantitative data. Positivist researchers attempt to deny the research hypothesis. A good positivist is replicable, which means comparable results are expected when the research is conducted again in the same way (Cavana et al., 2001). Positivist research means to discover universal laws and phenomena that can be used to predict human behaviour (Gephart, 1999; Lincoln and Guba, 2000). Research methods and types of analysis include experiments, questionnaires, secondary data analysis, quantitatively-coded documents and statistical analysis.

3.2.2 **Interpretive Research**

Interpretive research believes that people experience physical and social reality in different ways. Interpretive research identifies what is meaningful to individuals being investigated and becomes fully involved with these individuals. This involvement allows the researcher to find out the socially constructed meaning of reality (Ghauri et al., 1995). Research methods and types of analysis include ethnography, participant observation, interviews, focus groups, conversational analysis and case studies (Gephart, 1999; Lincoln and Guba, 2000).
3.2.3 Critical Research

Critical research assumes that people have unrealised potential and can adapt and transform themselves. Critical research therefore forces change on people before they are ready and/or focuses on destroying current reality without providing processes for building a new reality. The aim of critical research is to empower people to create a better world for themselves (Ghauri et al., 1995). Critical research methods and types of analysis include field research, historical analysis and dialectical analysis (Gephart, 1999; Lincoln and Guba, 2000).

The above three different beliefs govern (1) what type of research should be chosen, (2) the ways in which the research should be conducted, and (3) the results the research should accomplish (Ghauri et al., 1995). This research falls in the positivist paradigm because the objective of the work is to discover an observed phenomenon how to retain bank customers in the Internet banking service setting through testing hypotheses to identify a set of existing universal laws. The next section presents various research methods and designs.

3.3 Research Methodologies and Designs

‘Research methodology’ refers to the overall approach and design of the research process from theories through to data collection and analysis (Hussey and Hussey, 1997). The key criterion when making decisions about research methodology is how useful it will be for the study (Silverman, 1994). Exploratory, descriptive and hypothesis testing based on
different research paradigms can be used depending on the stage to which knowledge about the work has advanced (Cavana et al., 2001). Decisions concerning research could start with qualitative assumptions and proceed to quantitative methods of exploring new areas of interest. They could then continue with a description of the phenomenon and finish off by testing the hypotheses to either confirm or deny the relationships among variables.

3.3.1 Research Types

The first of the three main types of research, exploratory research design, is suited to research problems that are badly understood (Ghauri et al., 1995). It is also suited to looking for patterns, ideas or hypotheses when there is a lack of information about the issue being referred to (Hussey and Hussey, 1997). Qualitative studies involve the collection of data through observation, interviews, focus groups or case studies that are exploratory in nature (Cavana et al., 2001). Exploratory research is based on interpretive and critical research beliefs.

Descriptive research design is suited to research problems that are well understood and structured. The key characteristics of descriptive research are structure and precise rules and procedures (Ghauri et al., 1995). When the characteristics under investigation in a given situation already exist, descriptive studies are suitable since they can offer a profile of the factors to reveal the phenomena more clearly (Cavana et al., 2001). Descriptive research is more of a positivist paradigm.

Hypothesis testing offers a better understanding of the relationships that exist among variables. Hypothesis testing can reveal cause and effect relationships (Cavana et al.,
When a researcher delineates the important variables that are associated with a problem, this is called a ‘correlational study’ (Cavana et al., 2001). Hypothesis testing also belongs to the positivist philosophy.

Any research can adopt more than one type of research method (Cohen and Manion, 1994; Glaser, 1992). Nevertheless, the choice of a research design, given the constraints of time, budget and skill, is the overall strategic approach made to meet the objective of collecting meaningful information to answer the research problem being studied in the best possible way (Ghauri et al., 1995).

This study does not fall into the exploratory research type which is good for dealing with badly understood research problems and discovering patterns or ideas out of very little or no information about the study. This research centres on a problem that is well structured and clearly understood, namely the relationship between customer satisfaction, customer commitment and trust on customer retention in the context of Internet banking. Therefore, the research is of a descriptive nature.

The purpose of this research is to reveal the phenomenon of how to retain bank customers on the Internet banking service setting. Hypotheses that are developed based on the theories existing in previous researches in non-Internet setting services (Lee et al., 2001; Ranaweera and Prabhu, 2003a) can test the relationship of the variables in the Internet banking service settings of this research to see if the theories are supported in the new context. Owing to this, hypothesis testing is adopted for the purpose of this study.
3.3.2 Research Setting

Field experiment and field study are the two main study settings. The experimental approach is more appropriate for devising a new theory because of the opportunity to exert control over the phenomenon and to identify and limit the number of extraneous variables present (Hussey and Hussey, 1997). With reasonably well-formulated theories, field studies are suited to testing them in real-life settings.

A field study seems suited to the purpose of this research and is adopted since it is a correlational study of delineated variables, and the relationship between customer satisfaction, customer commitment, trust and customer retention has been reasonably well formulated in previous research in non-Internet settings (Garbarino and Johnson, 1999; Lee at al., 2001; Oliver, 1999; Ranaweera and Prabhu, 2003a).

3.3.3 Research Timing

There are two different research timings – longitudinal and cross-sectional studies. Longitudinal studies gather data from more than one point in time to meet the objectives of the research. Longitudinal studies can help to identify cause-and-effect relationships from data collected both before and after a manipulation (Cavana et al., 2001). However, longitudinal design requires more time, money and effort than cross-sectional design. Cross-sectional studies collect data only once over a period of time. Cross-sectional design is the most widely used method in business research since the administration of data collection is relatively simple. Budget and time constraints demand that a cross-sectional design be used for this research. Once a research design had been decided upon, the next step is to identify the key variables for measurement, which is covered in the next section.
3.4 Measure Designs and Key Variables

3.4.1 Measures

Several rating scales are used in business research, and each rating scale has its function and characteristics serving different purposes. Dichotomous scale serves to elicit a ‘yes’ or ‘no’ answer to questions. This scale is normally used to measure the demographic characteristics of the respondents in studies.

Ranking scale has been ruled out for this research since this scale is used to rank variables whereas this research aims to rate customer’s attitudes and behaviors. A Likert scale is one of the scales most frequently used to measure attitudes and behaviours in business research (Cavana et al., 2001). The interval measurement is commonly used to examine how strongly respondents agree or disagree with statements on a five- or seven-point scale to measure variables in hypotheses.

There is a consensus that unless there are very good reasons for developing a new set of measures (such as the inadequacy of or unavailability of previous measures) it is preferable to adopt existing measures that work for one’s own research (Churchill, 1979). Since sources of secondary data developed by previous researches to assess customer satisfaction, customer commitment, brand trust and customer retention are available (Berry, 2000; Davis, Buchannan-Oliver & Brodie, 2000; Morgan and Hunt, 1994; Ranawera and Prabhu, 2003a), a set of already existing measures has been adopted.

All the constructs were measured using scales that were previously established – six items were used to measure customer satisfaction (Oliver and Svan, 1989; Jones, Mothersbaugh
& Beatty, 2000; Sharma and Patterson, 2000), eight items were used to measure customer commitment (Jones, Mothersbaugh & Beatty, 2000; Sharma and Patterson, 2000; Chaudhuri and Holbrook, 2001; Colgate and Lang, 2001; Homburg and Giering, 2001), and six items were used to measure brand trust (Sharma and Patterson, 2000; Chaudhuri and Holbrook, 2001; Colgate and Lang, 2001; Delgado-Ballester and Munuera-Alema, 2001). Since these measures are for non-Internet context, modification has to be made to apply to this study.

Complex scoring systems and multiple-item scales take more time to complete than simple scales, and since there is no proof that they are more reliable assessments of validity than simple scales, it is preferable to adopt a simple approach to assessing validity that can be fully reported (Jüni, Witschi, Bloch & Egger, 1999; Cochrane Reviewers’ Handbook, 2004). This research uses simple scoring systems and employs a seven-point scale to measure the perspectives of Hong Kong profitable bank customers towards retention in the context of Internet banking.

3.4.2 Key Variables

Four key variables have been identified in this research. Customer satisfaction, customer commitment, and brand trust are independent variables whereas customer retention is a dependent variable. These variables are set in the hypotheses to be tested to determine whether or not any of the independent variables, single or joint or mediate another one, have an effect on or are associated with the dependant variable. The variables are presented in a survey questionnaire to measure the relationships between them. Measurement is the assignment of numbers to objects or events according to rules
(Stevens, 1951). Measures are a means to obtain valid data for meaningful findings (Bagozzi, 1980). Section 3.5 presents the validity and reliability assessments in survey questionnaires.

### 3.5 Validity and Reliability Assessments

Many researchers accept the notion that research measurement is generally concerned with the quantification of concepts. However, some researchers argue that this is a very restricted concept of measurement since this concept ignores the theoretical structure that the measures are being used to test (Bagozzi, 1980). That is to say that measure is a means to an end in researches. In other words, only accurate and reliable measuring instruments can obtain valid data for meaningful findings. Studies that attempt to contribute to the theoretical development of a particular field of academic research must demonstrate sufficient reliability, validity, as well as being sufficiently general (Runyon and Stewart, 1987).

Concepts of validity and reliability are concerned with the degree to which a measuring instrument is free from measurement errors or bias. Validity and reliability tests of the measures of the questions in a survey questionnaire are crucial; these tests must be carried out rigorously in order to ensure that the data being collected is of value. Only valid and reliable data that have been analysed correctly can reveal meaningful findings.
Validity Testing

Validity assesses whether or not a test measures what it claims to measure (Burns, 2000). There are several types of validity measures to assess the performance of a measuring instrument: face, content, criterion and construct. Table 3.1 summarizes the five main types of validity tests and their characteristics and comments on the use of each type (Litwin, 1995). From a customer-research point of view, content validity, criterion-related validity and construct validity are of major importance (Kerlinger, 1980).

<table>
<thead>
<tr>
<th>Type of Validity</th>
<th>Characteristics</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face</td>
<td>Casual review of how good an item or group of items appears</td>
<td>Assessed by individuals with no formal training in the subject under study</td>
</tr>
<tr>
<td>Content</td>
<td>Formal expert review of how good an item or series of items appears</td>
<td>Usually assessed by individuals with expertise in some aspect of the subject under study</td>
</tr>
<tr>
<td>Criterion: Concurrent</td>
<td>Measures how well the item or scale correlates with ‘good standard’ measures of the same variable</td>
<td>Requires the identification of an established and generally-accepted good standard</td>
</tr>
<tr>
<td>Criterion: Predictive</td>
<td>Measures how well the item or scale predicts expected future observations</td>
<td>Used to predict outcomes or events of significance that the item or scale might subsequently be used to predict</td>
</tr>
<tr>
<td>Construct: convergent &amp; discriminant</td>
<td>Theoretical measure of the meaningfulness of a survey instrument</td>
<td>Determined usually after years of experience by numerous investigators</td>
</tr>
</tbody>
</table>

Table 3.1: Major Types of Validity Tests and Their Characteristics - Modified
(Source: Litwin, 1995)
‘Content validity’ refers to the degree to which a specific set of items is a representative and appropriate sample of the subject matter or content that the test is intended to measure. The theory of content validity suggests that a measurement (scale) has a content validity when its items are a randomly-chosen subset of the universe of appropriate items (Cronbach and Meehl, 1955).

For the questions in this survey questionnaire, negative and biased questions, derogatory statements, slang terms and prejudicial questions are avoided. In addition, questions are kept relatively short and clear with each question representing only one aspect of the variable being measured for the achievement of good content validity.

‘Criterion-related validity’ refers to the extent to which scores in a test correspond to a certain criterion. In this survey, scores are compared with one or more external variable (criteria) believed to measure the attribute in the study to ensure criterion validity. This is to check if the measurement scale can predict some future phenomenon. Criterion-related validity was formerly called ‘predictive validity’ or ‘empirical validity’ because it primarily evaluated statistically, and if the measurement scale can predict some future event, then predictive validity is established (Kerlinger, 1980). Factor analysis is a data-reduction technique used to reduce a large number of overlapping measured variables to a much smaller set of factors (Kerlinger, 1980).

Two stages of factor analysis can be performed (Green, Salkind & Akey, 2000): factor extraction and factor rotation. The objective of factor extraction is to decide preliminarily on the number of factors underlying a set of measured variables, while the objective of the factor rotation is twofold: (1) To statistically manipulate (i.e., to rotate factors) the results so that the factors can be understood, and (2) to decide finally on the number of
underlying factors. In this study, factor analysis was performed to reduce several repeated measured variables to make a smaller set of factors. As a result, the final factors or constructs are refined and they succinctly represent a set of valid measures for the survey.

‘Construct validity’ refers to the degree to which a test measures the target construct, or psychological concept or variable, inferred from all of the logical arguments and empirical evidence available. Construct validity is thus directly concerned with the relationship of one variable to other variables (Cronbach and Meehl, 1955). Convergent and discriminant validity are both considered subcategories of construct validity. If there is evidence demonstrating both convergent and discriminant validity, then by definition construct validity is established. However convergent and discriminant validity work together and either one alone is insufficient for establishing construct validity. The two are inter-locking propositions. Convergent validity is performed to demonstrate measures of constructs that theoretically should be related to each other and that are observed to be related to each other, that is, to show a correspondence between similar constructs (Reichardt and Coleman, 1995). Discriminant validity is performed to demonstrate measures of constructs that theoretically should not be related to each other are observed to not be related to each other, that is, to discriminate between dissimilar construct.

Convergent and discriminant validity can be viewed as differences of ‘degree’ instead of differences in ‘kind’. To estimate the degree to which any two measures are related to each other the correlation coefficient can be used to reveal the patterns of intercorrelations among the measures (Campbell and Fiske, 1959). Correlations between theoretically similar measures should be ‘high’ while correlations between theoretically dissimilar measures should be ‘low’. In general, convergent correlations are desired to be
as high as possible and discriminant ones to be as low as possible, and the convergent correlations should always be higher than the discriminant ones.

“If the study lacks construct validity, the findings are meaningless, destroying the internal and external validity of the findings” (Ghauri et al., 1995, p.51). Internal validity refers to the question of whether or not the results obtained within the study are true whereas external validity refers to the question of whether the findings can be generalised to other populations, settings or periods (Ghauri et al., 1995).

There are threats to validity, and four of these threats are serious ones (Ghauri et al., 1995). They are explained below:

1. History – happenings outside the study that occur at the same time and that may affect the response;
2. Maturation – the processes operating within the test units in the study as a function of the passage of time or the nature progression of subject under study;
3. Test effect – the awareness of the chosen respondents may affect the observed response; and
4. Selection bias – when the respondents are not chosen randomly.

To the best knowledge of the researcher of this study, there are no noticeable happenings taking place contemporaneously with this research that may affect the response. Therefore, it was assumed that there is no threat to history. The survey of this study is a cross-sectional type operating at one time only so it avoids the maturation threats of validity. Regarding the threat on test effect, this was minimised by the statement made clearly on the information sheet attached to the questionnaire to the effect that
participants will be anonymous and participation in the survey was entirely voluntary. However, because of the unavailability of a sample frame for this research to locate the subjects of survey, judgement sampling has been used for this study. Judgement sampling is one of the non-probability sampling techniques whereby respondents are not chosen randomly, therefore selection bias may exist.

All in all, every effort has been made in this research to avoid threats to validity, and the content validity, criterion-related validity and construct validity have been observed to increase the internal and external validity of the survey questionnaire, the measuring instrument, of this study.

3.5.2 Reliability Testing

‘Reliability’ refers to the stability, accuracy and dependability of data (Burns, 2000). The reliability of a measure offers consistent measurement across time and across the various items in the instrument (Cavana et al., 2001). The more consistent the results from a measurement instrument, the more reliable they are (Shannon and Davenport, 2001).

Reliability becomes a necessary condition of the value of research results and interpretation. To establish the reliability of the survey questionnaire of this research, recommendations from Kerlinger (1980) will be followed. Reliability is commonly assessed in the forms of test-retest, intraobserver, interobserver, alternate-form and internal consistency. Table 3.2 summarises the major types of reliability tests and their characteristics with comments (Litwin, 1995).
<table>
<thead>
<tr>
<th>Type of Reliability</th>
<th>Characteristics</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test-retest</td>
<td>Measures the stability of responses over time, typically in the same group of respondents</td>
<td>Requires administration of survey to a sample at two different and appropriate points in time, but time points that are too far apart may produce diminished reliability estimates that reflect actual change over time in the variable of interest.</td>
</tr>
<tr>
<td>Intraobserver</td>
<td>Measures the stability of responses over time in the same individual respondent</td>
<td>Requires completion of a survey by an individual at two different and appropriate points in time, but time points that are too far apart may produce diminished reliability estimates that reflect actual change over time in the variable of interest.</td>
</tr>
<tr>
<td>Alternate-form</td>
<td>Uses differently worded stems or response sets to obtain the same information about a specific topic</td>
<td>Requires two items in which the wording is different but aimed at the same specific variable and at the same vocabulary level.</td>
</tr>
<tr>
<td>Internal consistency</td>
<td>Measures how well several items in a scale vary together in a sample</td>
<td>Usually requires a computer to carry out calculations</td>
</tr>
<tr>
<td>Interobserver</td>
<td>Measures how well two or more respondents rate the same phenomenon</td>
<td>This type may be used to demonstrate reliability of a survey or may itself be the variable of interest in a study</td>
</tr>
</tbody>
</table>

Table 3.2: Major Types of Reliability Tests and Their Characteristics  
(Source: Litwin, 1995)

Of the five types of reliability tests mentioned in Table 3.2, interobserver reliability provides a measure of how well two or more evaluators agree in their assessment of a variable, so this is often used when the measurement process is less quantitative than the variable being measured.
For the survey questionnaire used in this research, a test-retest is performed for the reliability of the measuring instrument. A group of eight friends, four males and four females, formed a focus group. They were given the draft survey questionnaire in person to fill out for the researcher. A week’s later; this group of people is given the same questionnaire, with questions reordered, to test the consistency of the answers of the respondents against their previous one. The result of reliability of the measuring instrument is satisfactory as the answers are exactly the same as the previous questionnaires.

Internal consistency can be tested in two ways: split-half reliability and inter-item consistency reliability. Split-half reliability shows the correlations between the two halves of a measure. However, the way the items in the measure are split may vary the split-half reliability estimates (Cavana et al., 2001). Inter-item consistency reliability is a test of the consistency of the respondents’ answers to the items in a measure. Theoretically, items that are independent measures of the same concept will be correlated with one another. Cronbach’s coefficient alpha (\( \alpha \)) (Cronbach, 1946), used for multiple indicators or items, can be considered a perfectly adequate index of the inter-item consistency reliability (Cavana et al., 2001).

Inter-item consistency reliability test is conducted for the questionnaire of this research. The Cronbach’s coefficient alpha for the multiple items is obtained and used to determine the reliability of the scales and results. The alpha is conceived as a measure of the intercorrelations between the various indicators used to capture the underlying construct in this survey. The higher the coefficients, the more reliable the survey questionnaire of this study is (Ghauri et al., 1995). If items are a consistent measure of the same construct
after Cronbach’s alpha is performed, then the variables themselves should be correlated. Variables that have low inter-item correlations may not belong to the same construct and will be dropped from the questionnaire of this survey (Nunnally and Bernstein, 1994). Using item analysis, the extent to which variables perform as consistent measures of a single construct of this research can be examined. One key objective of scientific research is to discover and determine the relationships between variables. Reliability becomes a necessary condition of the value of research results and interpretation.

There are certain strategies to establish the reliability of results. It has been identified that “the maximization of the variance of the individual differences and minimization of the error variance” is the primary principle underlying the improvement (Kerlinger, 1980, p. 454). When planning the survey of this study, the questionnaire employed as the measuring instrument was written unambiguously. Since adding more items increases the probability of accurate measurement as more items of equal kind and quality usually decreases the change error, each variable of this study has been put in several questions in the questionnaire to achieve accuracy. Additionally, clear and standard instructions for the questionnaire have been provided to avoid ambiguity and to decrease the error variance.

3.5.3 Significance and Limitations of Validity and Reliability

It has been reported that 93 research projects, representing 76 percent research of the study, neither pretest a questionnaire nor report that a pretest has been done (Pinsonneault and Kraemer, 1993). This can be interpreted as variation in validity and reliability leading to variation in results.
“Quantitative analysis of results from studies of variable validity can result in ‘false positive’ conclusions if the less rigorous studies are biased toward overestimating an intervention’s effectiveness. They might also come to a ‘false negative’ conclusion if the less rigorous studies are biased towards underestimating an intervention’s effect” (Detsky, 1992).

Therefore, more rigorous studies can expect to have results closer to the ‘truth’ (Cochrane Reviewers’ Handbook, 2004). For this survey, a pilot test and consultation with professionals in the area of Internet banking and academic researcher have been sought to ensure validity and reliability.

“There is no ‘gold standard’ for the ‘true’ validity of a trial and the possibility of validating any proposed scoring system is limited” (Cochrane Reviewers’ Handbook, 2004, p.54). Principles of measurement can be applied to the development of a scale for the assessment of the validity of randomized trials. However, there is no clear evidence that the relationship between such a score and the degree to which a study is bias-free. It can then be assumed that all scales currently available for measuring the validity of trials cannot be taken as perfect (Cochrane Reviewers’ Handbook, 2004). Validity and reliability tests of the measures of the questions in survey questionnaire are crucial and must be carried out rigorously in order to ensure that the data being collected is of value. Only valid and reliable data that is analysed correctly can reveal meaningful findings. The next section will define the research population and describes the sampling design for this study.
3.6 Sample and Sampling Designs

Quantitative research generally uses surveys to collect data through utilising a sample of the population to be studied (Pinsonneault and Kraemer, 1993). The sample design should result in valid and reliable inferences for the population at a low cost (Ghauri et al., 1995).

3.6.1 Population

Population refers to a whole group of people or things of interest the research intends to investigate (Cavana et al., 2001). The target population of this research is the professionals and business practitioners currently using Internet banking services in Hong Kong.

3.6.2 Sample

A sample is a portion of the population and is formed by selecting some members from a population (Cavana et al., 2001). A perfect representative sample would be a microcosm of the population from which it is drawn and is identical to the population in every way. This would enable inferences to be made about any aspect of the population from the sample (Hussey and Hussey, 1997). However, no sample selection method is perfectly random, so it is unlikely to have a perfect representative sample (Cavana et al., 2001). Therefore, during sampling design, the most important attributes under investigation have to be observed to ensure that the most representative sample population to the study is used.
3.6.3 Sample Size

The following equation can be used to determine the suitable sample size (Narins, 1994). This equation is ideally used for dichotomous variables but it is also suitable for Likert scales if \( Py \) and \( Pn \) are both set at 0.5.

\[
N = \frac{(Py)(Pn) + Std.Error^2}{(Py)(Pn) + Std.Error^2}
\]

where

\[
N = \text{the sample size required}
\]
\[
N_i = \text{the size of the true population}
\]
\[
Py \text{ and } Pn = \text{the percent of response to a dichotomous variable}
\]
\[
\text{usually set at (0.5) (0.5) for the most conservative estimate}
\]
\[
Std.Error^2 = \text{the standard error}
\]

For this research, this equation was not used to calculate the sample size as the size of the true population is unknown. It has been suggested that a sample of between 200 and 1,000 respondents for populations of 10,000 or more is preferable (Alreck and Settle, 1985). After taking into account such resources as budget, time and accessibility to respondents, this survey targeted 200 respondents in order to provide sufficient power for the statistical analyses.

3.6.4 Sampling Designs

There are two main types of sampling designs: probability sampling and non-probability sampling. With probability sampling, the subjects of the population have some known
chance of being selected as a sample whereas non-probability sampling does not have any known chance of being selected as a sample (Cavana et al., 2001).

3.6.4.1 Probability Sampling Methods

Probability sampling is essential to ensuring a high degree of generalisation or external validity. Probability-sampling methods include simple random sampling and complex probability-sampling designs.

Simple random sampling involves randomly drawing samples with a known and equal chance from a population (Cavana et al., 2001). Selection bias poses a serious threat to the validity of the representativeness of the sample, which is when the respondents are not chosen randomly (Ghauri et al., 1995). This method is easy to understand and apply (Ghauri et al., 1995), and its design has the least bias and offers the most general sample. However, this method could turn out to be both costly and cumbersome and an updated list of the population may not be available (Cavana et al., 2001). A complete frame is needed and the standard errors of the estimators will typically be large, resulting in a wide confidence interval (Ghauri et al., 1995). For these reasons, simple random sampling is not often chosen for business research.

The three most common complex probability-sample designs are systemic sampling, stratified random sampling and cluster sampling. ‘Systemic sampling’ involves obtaining a sample by drawing every nth unit in an orderly population with a randomly chosen unit between 1 and n (Cavana et al., 2001). The advantages of this method lie in its simplicity and no sample frame is required, although the probability of a hidden systematic bias may exist (Ghauri et al., 1995).
‘Stratified random sampling’ involves a process of dividing the population into subgroups (strata) followed by a random selection of subjects from each stratum. Each stratum bears different characteristics for better representations. Stratified sampling requires determination of how the total sample should be allocated between the strata (Ghauri et al., 1995). This design achieves higher precision, provides separate results for each stratum and simplifies data collection. The drawbacks are that it needs a complete frame with such additional information as standard deviation and costs for each stratum (Ghauri et al., 1995).

Cluster-sample design involves selecting one group (or cluster) as the sample from a population that is split into heterogeneous groups (De Veaux, Velleman & Bock, 2005). That is to say that the clusters are similar in almost every way. Cluster samples offer more heterogeneity within groups and more homogeneity among groups. However, a definition of clusters is required (Cavana et al., 2001). The advantages of this design are that it does not require the inclusion of a sample frame, is convenient and cheap to run and, in the case of an interview, can be geographically centred. The disadvantages are poor precision (Ghauri et al., 1995) and low confidence in the results (Cavana et al., 2001).

3.6.4.2 Non-Probability Sampling Methods

Non-probability sampling designs can be categorized into two main types: convenience sampling and purposive sampling. The objective of these designs is for the sample to be as general as possible but also to be a quick and inexpensive way to seek important guides to potentially useful information regarding the population (Cavana et al., 2001).
In convenience sampling, subjects are taken wherever and whenever they are handy (De Veaux et al., 2005). This method is the least reliable of all the sampling designs in terms of generalisability (Cavana et al., 2001). However, this method is a good way of obtaining preliminary information during the exploratory phase of a research project in a quick and inexpensive way if generalisability is not an issue in the study.

In purposive sampling, subjects are predetermined because they either meet the criteria of the researcher or they simply possess that specific information (Cavana et al., 2001). Three main categories of purposive sampling can be identified: snowball sampling, quota sampling and judgement sampling.

Snowball sampling is particularly useful for gaining access to information from people who are very difficult to locate and contact under normal circumstances. Despite the initial sample group being selected by probability or non-probability methods, new subjects can be recruited based on recommendations of the initial subjects. Consequently, bias can occur as subjects may refer people who share similar views as theirs.

Quota sampling can ensure that different groups in a population are adequately represented in a study through the assignment of a quota. Quota sampling can be taken as a form of proportionate stratified sampling in which a predetermined proportion of subjects are sampled from different groups but on a convenient basis. As a result, the quota samples are basically stratified samples selected non-randomly. By and large, the main drawback to any kind of non-probability sampling design is that it may not be sufficiently general (Cavana et al., 2001).
Judgement-sampling design is employed when a limited category of people possesses the requisite information. This sampling requires special efforts to locate and contact these people, and the method may curtail the generalisability of the findings because the subjects being studied are conveniently available to the researcher.

The subjects under study in this research project are professionals and business practitioners who currently use Internet banking services available in Hong Kong. The lists of these people are neither disclosed by banks nor can they be retrieved on any government websites. The subjects under study were assumed to be widely dispersed around Hong Kong. Despite samples from probability sampling having a higher representativeness of the population being investigated, judgement sample design (one of the non-probability sampling methods) was adopted to reach these specific targets. Section 3.7 evaluates the different methods employed in collecting data.

3.7 Data Collection and Administration Methods

It has been suggested that survey research uses a set of orderly procedures that specify what information is to be obtained, from whom the information is to be obtained and how the information is to be obtained (Backstrom and Hursh-Cesar, 1981). This concerns the administration methods covering the production of the measuring instrument used to obtain the responses. The hypotheses in this research are interpreted into questionnaires to measure the variables of interest (Cavana et al., 2001).
3.7.1 Structure of the Questionnaire

Question sequencing and layout are two important aspects of any questionnaire structure. The principle underlying the sequencing of the questions in a questionnaire is to group them by the subject to which they refer. Within each subject group, the questions tend to be grouped into relatively straightforward factual questions followed by the measure relevant to that area. The factual questions in this research have been included to help the respondents think about that particular aspect of perception of Internet banking services and to provide a context for the appropriate measures. Such sensitive questions as age and income are placed at the end of the questionnaire.

Thought was given to the overall layout of the questionnaire so as to give it a neat and orderly appearance, thus making it easier for respondents to read as well as encouraging them to respond. A small graphic of ‘e-money’ was pasted at the top of the questionnaire to direct the respondents’ attention to the theme of the research. A bunch of flowers was at the end of the questionnaire to express the researcher’s gratitude for the respondent’s effort in responding to the questionnaire. The questionnaire in this survey was divided into two parts: Part I consisted of twenty questions focusing on questions relating to customer perceptions of Internet banking service. Part II consisted of seven demographic questions (Appendix I).

During the development of the survey questionnaire for this study, established sources of the type and with the same constructs of this study were referenced and examined. Modification was then made on the established measures to fit the specific aim of this study and lead to the formation of the twenty questions investigating customer perceptions of Internet banking service (Appendix II).
3.7.2 **Translation of the Language of the Questionnaire**

Were this research to be conducted in a predominantly non-English speaking city or country, the survey questionnaire would be translated from English into the local language by taking Brislin’s (1980) recommendation for minimizing the problems between the two language versions. However, since English is the second language of Hong Kong and the target respondents of this survey are professionals and business practitioners in Hong Kong with a high level of competence in English, the questionnaire was prepared solely in English.

3.7.3 **Survey Questionnaire Pilot Test**

When the survey questionnaire was drafted, there were many assumptions and pre-judgments about what respondents were both able and willing to do. Accordingly, there was a need to pilot-test the questions with non-target respondents to gain objective views. Pilot-testing a questionnaire can help to guard against faulty assumptions and detect flaws in the questionnaire and identify and correct potential impediments before the survey instrument is used for collecting data of value. Pilot testing can also help to check the time taken to complete the questionnaire.

Consultation with professional experts and cultural insiders often helps to reduce deliberate bias and broaden the scope of an instrument before it is used (Converse and Presser, 1986). The aim of such consultations is (1) to determine whether or not the structure of the composite questionnaire is appropriate, (2) to ascertain whether the format and wording of the questions is understandable to the respondents, and (3) to
check that no additional problems might arise by the compilation of different questions into a single questionnaire.

The professional experts and cultural insiders, which included two bank managers, one lecturer in research methodology, and one IT expert, were consulted during the drafting stage of the questionnaire in this study. Twenty Doctor of Business Administration students were asked to complete the draft questionnaire to detect any problems in answering the questions and to test the time for completion. Their comments, on the content and structure of the questionnaire, were taken seriously in the revision and finalizing of the questionnaire. The average time for completing the questionnaire was twelve minutes.

3.7.4 Data Collection Methods

There are three commonly used data collection methods: interviews, observation and questionnaires. Sections 3.7.4.1 to 3.7.4.3 discuss the strengths and weaknesses for each of them and conclude with the methods being adopted for this study.

3.7.4.1 Interview

Interviews provide rich data and allow complex issues to be uncovered. This method is ideal during the exploratory stage of a research in order to understand the concepts or situational factors. However, this method could introduce interviewer bias, as well as prove expensive if a large-scale survey involved personally interviewing many subjects. It is also essential that interviewers receive specialised training.
3.7.4.2 Observation

Observational studies are conducted through direct observation. An observer can seek clarification on complex issues by asking questions on the spot. The data obtained are rich and original and this method is best for research requiring non-self-report descriptive respondents. The main drawback to this method is that it is drawn-out and could prove expensive to run.

3.7.4.3 Questionnaires

Questionnaires are an efficient data-collection mechanism for measuring the variables of interest. Questionnaires can be administered personally and mailed to the respondents or electronically distributed.

A personally-administered questionnaire can be a good tool for collecting data since a researcher can introduce the research topic face to face with the respondents and encourage them to answer. The researcher can, at the same time, clarify any doubts about answering the questions and quickly collect the completed questionnaires.

Mail questionnaires are suited to surveys that cover a wide geographical area. Respondents can complete the questionnaires in the location of their preference and at their own pace. Despite these merits, the researcher has no chance of clarifying any doubts respondents may have. Furthermore, the return rate of mail questionnaires is low, with a return rate of 30 percent being considered acceptable (Cavana et al., 2001). With such a low response rate, the representativeness of the sample in generalizing the results
to the population is questionable. The response rate may be augmented by such means as pictures being added to illustrate the questionnaires, keeping the questionnaire brief, sending follow-up letters, offering small incentives or gifts to respondents, and providing self-addressed, stamped-return envelopes.

Electronic questionnaires are easy to design and administer with ready-made programmes. Mailing computer disks to potential subjects is cheap. Questionnaires inviting responses can also be posted on free-of-charge websites. The key advantages to running an Internet survey questionnaire are accuracy, convenience, speed and reduced costs (Black, Efron, Ioannou & Rose, 2005; McMellon and Schiffman, 2001). Furthermore, the usual lead-time involved in distributing and collecting a survey questionnaire by mail is eliminated. At the same time, respondents are more likely to respond if they can save on the time and effort involved in mailing their responses. It has also been claimed that data collected by electronic mode is more reliable than on printed mode because respondents can check and change their answers before submitting them (Cavana et al., 2001). The disadvantages to this method lie in it requiring respondents to be computer literate and to have access to computers and emails. Furthermore, a print-out form could serve the purpose better since some information may not be immediately accessible to the respondents.

This study used multi-methods comprising personally-administrated, mail and Internet modes. These methods together with the multiple sources to collect data lend rigours to the research (Cavana et al., 2001) as the combination of methods minimizes the specific bias associated with each method of data collection.
3.7.5 Getting Respondents

Initial contacts with various organisations having access to professionals and business practitioners were made by telephone, email or letter. The purpose of the research was explained and a request was made for permission to invite participants from the organisation’s members, employees or associates for voluntary participation in the survey. Follow-up phone calls requesting a verbal agreement or refusal to participate were made to the management of these organisations and companies. Each organisation or company agreeing to distribute the survey questionnaires to their employees, associates and members was asked to provide a formal letter of consent. Consent for their members, employees or associates to participate in the survey were sought from the management of the following ten organisations and companies. The main business of each organisation appears after its name:

1. Hong Kong Management Association (HKMA) - a non-profit-making professional organization with a membership of over 11,000 executives that aims to improve the effectiveness and efficiency of management in Hong Kong;
2. Hong Kong Quality Management Association (HKQMA) – a non-profit-making organisation with members in various businesses that promotes quality-circle activities and quality-management practices in Hong Kong;
4. WK Taxation Management Limited – practising certified public accountants;
5. Global-semic Information Technology Limited - software design and application consultation services;
6. Brånemark Osseointegration Center Hong Kong - oral & maxillofacial surgery;
7. Charles K. M. Chan & Co. - practising certified public accountants;
8. Margaret Tang Management Consulting - management consultation services;
9. May’s Touch Artistic Hairdressing - professional hairdressers;
10. Wui Po Kok – a company trading in antiques.

HKMA preferred the researcher to meet its members face to face to collect data in order to save the organisation’s administration effort while HKQMA preferred the questionnaires to be mailed to their members. Several companies preferred to have the questionnaires emailed to their members whereas others preferred to have the questionnaires delivered to their offices for completion and collected in person by the researcher.

Since the subjects of investigation were or had been Internet banking users, it was reasonable to assume that they had access to the Internet, and so it was logical to post the questionnaire on an Internet public website. The questionnaire, together with a covering letter, was posted on the free Internet survey server of www.my3q.com from 15th September 2006 to 14th October 2006 for them to respond. Respondents were asked in the survey questionnaire to anonymously answer an survey of twenty-seven questions, including some personal data, relating to their perceptions of Internet banking. It took approximately fifteen minutes to complete the survey either on screen or on paper.

The respondents returned the survey questionnaire in one of three ways:
1. The management of the organisations or companies involved handed the survey questionnaires in person to the respondents and then collected the completed questionnaires for final collection by the researcher;
2. The management of the organisations or companies involved handed the survey questionnaires in person to the respondents. When the respondents completed the surveys, the management put the questionnaires in a pre-addressed stamped
envelopes prepared by the researcher, and mailed them back to the researcher;

3. The respondents returned the completed survey questionnaire by clicking the ‘submit’ button on the webpage.

The survey questionnaire, together with a covering letter, (1) explained the purpose of the survey, (2) reassured potential respondents of the ease in answering the questionnaire, and (3) provided an undertaking of anonymity. Participation in the research is voluntary, but an assurance is made to the respondents that: (1) stated that respondents would be notified of the research findings, (2) that a brief report of the findings would be provided to the management of the organisations accepting the invitation to participate, and (3) the researcher would recommend to the management of the organisation that the report be made available to all staff.

It was felt that these assurances would encourage respondents to feel they would derive a positive benefit from their participation in the survey as they could learn about others’ attitudes to Internet banking. A month was scheduled to collect the responses, after which they were checked and coded. Section 3.8 presents the various ethical issues involve in data collection.

### 3.8 Ethical Issues

Since this research involved members of the public, certain ethical issues had to be observed when preparing this survey for participants. In the first place, no sensitive questions were asked or private information collected. The information sheet explicitly stated that participation was entirely voluntary. The research did not involve any
payments, rewards or inducements to respondents for completing the questionnaire. In the case of HKQMA, the researcher paid an administrative and handling fee of HK$1,500 (the amount includes envelopes, mailing labels and postage stamps) for distributing the questionnaires with the covering letter (information sheet) and returning envelopes to its 320 members.

Consent had to be obtained from senior management of the targeted organisations to distribute the survey questionnaires to their members, employees or associates, and the return the survey questionnaire to the distributor or sender implied the informed consent of the participants. Anonymity was observed as no respondents’ names or other inferences or identification were recorded in the survey questionnaire. There were no potential conflicts of interest for the researcher because the researcher works in a publishing company whereas this research into the behaviour of bank customers using Internet banking was not relevant to the researcher’s occupation. The researcher has no commercial or financial interests in conducting this study, nor will the researcher gain any benefits from any outcomes of the work.

The researcher and the project supervisor treated all data as strictly confidential. Printouts of the completed questionnaires were stored securely in a locked drawer in the researcher’s office. All data (accessible only by passwords) was stored on the Personal Computer (PC) of the researcher and her supervisor. Once the data was analysed and the study completed, all printed completed questionnaires were destroyed through shredding. The soft copy of the raw data will be erased five years after the project has been completed. Section 3.9 assesses different data analysis techniques and selects the tests for the raw data of this survey.
3.9 Data Analyses

Completed questionnaires were checked and coded before the raw data was entered for analysis. A number of statistical techniques were applied to test and interpret the results of the data analysis.

The chi-square test was performed to analyse nominal data. Tests that make inferences about population parameters are called ‘parametric tests’. The chi-square test is a nonparametric test because it does not use means or standard deviations to infer population parameters. The assumptions of the chi-square test are that the data are in the form of a frequency count, the sample represents the population of interest, and each observation is independent and separate from other observation (Grimm, 1993).

The independent-samples $t$ test can be used to test for a statistically significant difference between two means. This test is to compare the means of the two samples to make an inference about whether the population means from which the samples are chosen are different. When there are more than two samples or groups to be studied and compared, multiple $t$ tests can be used. However, this raises a serious tactical problem whereas analysis of variance (ANOVA) will be more suitable (Grimm, 1993).

In the case of evaluating the interaction among independent variables and the ways in which the interaction produces behaviour effect (Edgington, 1974), a factorial design can be taken since this combines at least two independent variables. The design can reveal the effect (main effects) of each independent variable separately and the join effect (the interaction) of the independent variables.
A one-way ANOVA can be performed when there are two or more levels of one independent variable in a study. It is assumed that the $k$ populations are normally distributed with equal variance. Minor violations of these assumptions are not of importance, but it is essential that each subject’s score on the dependent variable be independent of every other subject’s score (Grimm, 1993).

The assumptions for the two-way ANOVA are the same as those for the one-way ANOVA. Firstly, the population distributions are normal; secondly, the variances of the populations are homogeneous; and lastly, observations are independent of one another. The $F$ test is robust and can be performed when the first two assumptions are not strictly met (Grimm, 1993). Linear regression is a statistical method used to predict the value of one variable when information about another, correlated variable is available. This test is conducted to interpret the relationship between the variables in the questions of a survey in order to test or deny the hypotheses (Grimm, 1993). Univariate linear regress has one independent variable and one dependent variable whereas multivariate linear regress has two or more independent variables and one dependent variable.

In this research, data collected was analysed using SPSS version 14.0 for purposes of descriptive statistics on the demographic characteristics of the subjects. Partial Least Square (PLS) Graph (version PLS-graph 03.00) was utilised to determine the interactions between the various constructs, namely customer satisfaction, customer commitment, trust and customer retention, for ascertaining the various structured equation models. The Beta in the reports is interpreted in terms of the relationship between the variables. The R-square in the reports tells the amount of variance explained in the dependent variable by the predictors (Cavana et al., 2001).
Inter-item consistency reliability was performed to test the consistency of respondents’ answers to the items in a measure. Theoretically, items that are independent measures of the same concept will correlate with one another. Cronbach’s coefficient alpha (α) (Cronbach, 1946) (used for multiple indicators or items) can be considered a perfectly adequate index of the inter-item consistency reliability (Cavana et al., 2001). The alpha can be conceived as a measure of the inter-correlations between the various indicators used to capture the underlying construct. If items are a consistent measure of the same construct after Cronbach’s alpha is performed, then the variables themselves should be correlated. Variables that have low inter-item correlations may not belong to the same construct and should be dropped from the measuring instrument (Nunnally and Bernstein, 1994). Using item analysis, it is possible to examine the extent to which variables perform as consistent measures of a single construct.

The alpha is used to determine the reliability of the scales and results and the standard is 0.7 (Nunnally, 1978) and the higher the coefficients, the more reliable the measuring instrument (Ghauri et al., 1995). The results of the analysis were reported in words for comprehension. The next section will explain the limitations of the survey.

3.10 Limitations

In research, “there is no ‘gold standard’ for the ‘true’ validity of a trial, as the possibility of validating any proposed scoring system is limited” (Cochrane Reviewers’ Handbook, 2004, p. 54). Principles of measurement can be applied to the development of a scale for the assessment of the validity of randomized trials. However, there is no clear evidence that the relationship between such a score and the degree to which a study is bias-free. It is
then assumed that all currently available scales for measuring the validity of trials cannot be taken as perfect (Cochrane Reviewers’ Handbook, 2004).

Cross-sectional data being collected in this study is biased, making it difficult to infer strongly on cause and effect whereas longitudinal studies can do a better job (Ghauri et al., 1995). Owing to the seldom static nature of relationships that are likely to change with time and moods, participants in the survey may react differently depending on different phases in the relationship formation and development process. This will inevitably have an impact on the overall relational commitment quality.

The main weakness of the judgement-sampling method, one of the non-probability sampling designs, being adopted for this study is that the subjects being chosen do not have a known chance of being selected, and this may lead to low representation of the population. Thus the findings may not be sufficiently general (Cavana et al., 2001). Similarly, non-response bias refers to the skew in the analysis and interpretation of the data owing to a large percentage of respondents not completing the survey, thus causing low generalisability of the results to the population (Bhaskaran, 2006).

In addition, the researcher does not have an opportunity to meet the respondents through the Internet to check if they have fully understood the questions and are clear about the sort of response required (Converse and Presser, 1986) in completing the electronic questionnaire. Thus, it can be assumed that interpretive error may occur if a respondent interprets a question in a way different from that of the researcher. This emphasises how vital it is to ensure that the questionnaire is as clear and concise as possible, and that appropriate answers are elicited. The next section will summarise the entire chapter on research methodology.
3.11 Conclusion

This research falls into the positivism paradigm and the research objective governs the research methodologies and designs to be selected. After detailed evaluation and assessment of different research nature and methods, a quantitative research with a highly structured survey questionnaire was designed for data collection. The questionnaire was checked by professionals and insiders and pilot-tested to detect faulty assumptions and minimize bias and errors. A seven-point Likert scale was used to measure variables of customer behaviours in the questions. Owing to time and budget, the one-off cross-sectional design was used.

Respondents were obtained through multi-methods sampling design which is through the Internet, personally administrated and mailed out to two non-profit making management organisations and eight private business firms that had consented to have their members, employees and associates participate in the survey.

The questions in the questionnaire underwent validity and reliability assessment to ensure meaningful findings. SPSS version 14.0 was used for purposes of descriptive statistics on the demographic characteristics of the subjects. Partial Least Square (PLS) Graph (version PLS-graph 03.00) was used to determine the interactions between the various constructs, namely customer satisfaction, customer commitment, brand trust and customer retention, for ascertaining the various structured equation models and testing the hypotheses of the research. Limitations of the research methods have been stated as a recommendation of improvement for future work.
CHAPTER 4    DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter describes the data analysis of the survey and presents the results of the hypotheses testing. Section 4.1 introduces the different sections of the chapter. Section 4.2 describes the demographic characteristics of the respondents in this survey. Section 4.3 presents the measurement model of this study and summarises it with the correlation of the constructs in a table. Section 4.4 explains the hypotheses tests carried out and reports the results of the statistical analysis which include the impact of independent variable on the dependent variable and the mediating effects of various independent variables on the dependent variable in the context of Internet banking. Section 4.5 summarises the hypotheses testing and reports on the results of the statistical analysis of the study, and Section 4.6 concludes the chapter.

4.2 Analysis on Demographic Characteristics

There were two main reasons for analysing the demographic characteristics of the respondents of the research. First, a clear profile of the characteristics of the respondents had to be established, and second, the representativeness of the samples to the population being studied had to be accessed (Lawley and Perry, 1998). The demographic characteristics of the respondents who are Hong Kong professionals and business practitioners were analysed and are summarized in the following sections.
4.2.1 Respondent Profile

As presented in Chapter Three (Research Methodology), samples were drawn from non-probability judgement methods to reach the specific target of Hong Kong professionals and business practitioners. Before the management of the companies or organisations agreed to participate in the survey, the survey questionnaire covered with an Information Sheet was sent to them. From the Information Sheet, the management was informed that Internet banking users were the subjects of study, so should the questionnaires be distributed to.

In the case of HKQMA, the management sent the questionnaire by mail to its members. The participants of the survey had the opportunity to read the Information Sheet and were informed that they had to be Internet banking users in order to participate in the survey. In the case of HKMA, the researcher personally distributed the questionnaires to those participants who were students of HKMA’s Professional Diploma, MBA and DBA courses and explained the criterion for participation.

An earlier study found that the demographic profile of Internet banking users in Hong Kong was similar to the demographic profile of Hong Kong general population (Iamasia, 2002). Based on this reference, the demographic profile of the respondents of this research was compared with that of Hong Kong population.

SPSS 14.0 was used for descriptive analysis of the demographic characteristics of the 208 respondents. Frequency tests were performed to determine demographic characteristics of the sample.
The personal data includes gender, marital status, age, education, income, working experience and occupation which are presented in the following sections.

### 4.2.1.1 Gender

![Gender Distribution Chart](image)

Data shows that 57 percent of the respondents were males and 43 percent were females. That is 119 out of the 208 respondents were male and 89 female. The difference between the number of males and females can be interpreted as there are more men working as professionals and business practitioners in Hong Kong than women. The ratio of males to females in this sample is 57 to 43. The finding showed that the sample is similar to the ratio of males and females (61 to 39) combining the occupation groups ‘Professionals’, ‘Associated professionals’ and ‘Managers and administers’ in Hong Kong (Hong Kong Annual Digest of Statistics, 2006a). As such this sample is representative of the population of Hong Kong.
Data showed that the majority of respondents are married, scoring 56 percent of subjects; singles account for 41 percent. Divorced and widowed, took up less than 3 percent of the total respondents with 2 percent and 0.5% percent respectively. No respondents indicated that they were separated or specified their marital status in other terms.

Since there were no statistics on marital status for occupations available, the government survey on marital status of the general labour force in Hong Kong was used to compare the figures of this item. The survey revealed 36 percent had never married and 64 percent are ever married (including married, widowed and divorced/separated) (Hong Kong Annual Digest of Statistics, 2006b), which is similar to this study, the ratio of married to single is 41 to 59 (including married, widowed and divorced). As such the sample of this survey can be generalized for the population of Hong Kong.
4.2.1.3 Age Group

The range of respondents’ age was between 21 or under and over 65 years old. There were no respondents younger than 21 years old. The age groups 21 to 30, 31 to 40 and 41 to 50 scored the same percentage, 31. Nine percent of the respondents were between the age of 51 and 60 whereas 1.5 percent of the respondents were between the age of 61 and 65. Only 0.5 percent of the respondents were over 65.

The government statistics of the age of employed persons combining the occupation groups ‘Professionals’, ‘Associated professionals’ and ‘Managers and administers’ in Hong Kong (Hong Kong Annual Digest of Statistics, 2006a) revealed that 52 percent are below 40 years old (60% are 40 or below in this study), and 48 percent are 40 or above (40% are 41 or above in this study). The finding showed that the sample is not too different from the government statistics. Therefore the sample of this survey is a fair and adequate representation of the population of Hong Kong.

Figure 4.3: Age of the Sample
4.2.1.4 Education

Five groups of education levels were chosen for the survey questionnaire. The figures show that the higher the education level, the higher the percentage in the groups was recorded. The five groups of education levels were: primary or below, secondary, post-secondary, university and postgraduate or above. Their respective scoring percentages were 0, 8, 18, 30 and 44. Among the groups, university and postgraduate accounted for the majority (over 74%) of the respondents whereas primary or below scored zero percent in the samples being studied.

Since there are no statistics on educational attainment for occupations available in Hong Kong, a government survey on educational attainment of employed people in Hong Kong was used to compare the figures of this item. The survey revealed 57 percent had secondary education and 29 percent had territory level education (Hong Kong Annual Digest of Statistics, 2006c). The statistics are not consistent with the education level
of the professionals and business practitioners in this study. The finding could be interpreted that the sample of this study, Hong Kong professionals and business practitioners, had education well above the overall standard.

4.2.1.5 Income

The monthly income of the respondents of between HK$10,001 and HK$20,000 scored the highest percentage, 29 percent, among all the six categories. Next was the range of HK$20,001 to HK$30,000, scoring 25.5 percent which was close to the range HK$50,001 or above which scored 24 percent. The income range of HK$30,001 to HK$40,000 accounted for 12 percent whereas the income range of HK$40,001 to HK$50,000 took up 9 percent. The remaining 0.5 percent fell in the range of HK$10,001 or below.

Figure 4.5: Income of the Sample
Since there is no statistics on income for occupations available in Hong Kong, a government survey on monthly employment earnings of the employed persons in Hong Kong was used to compare the figures of this item. The survey revealed the median monthly earning of employed persons in Hong Kong is HK$10,000. Thirty percent earn an income between HK$10,000 and HK$19,999 (29% in this study); ten percent earn between HK$20,000 and HK$29,999 (25.5% in this study); five percent earn between HK$30,000 and HK$39,999 (12% in this study); two percent earn between HK$40,000 and HK$49,999 (9% in this study); and fewer than four percent earn over HK$50,000 (24% in this study) (Hong Kong Annual Digest of Statistics, 2006d). The statistics were not consistent with the income of the professionals and business practitioners in this study. The finding could be interpreted that the sample of this study, Hong Kong professionals and business practitioners, earns well above the overall income standard.

4.2.1.6 Working Experience

The respondents had an average of 15.25 years of working experience. The median, the middle number, is 15 and the standard deviation is 8.97. About 67 percent of the sample had an age ranging from 6 to 24 years. This indicated that there was a wide spread of participants in the sample. The minimum working experience was three months and the maximum was 42 years.

4.2.1.7 Occupation

The question on occupation was an open-ended question in which respondents wrote their occupation in the space provided on the questionnaire. One respondent was retired and
seven did not answer the question. Sixty-nine respondents could not be identified as to what occupations they held as they confused the industry with the occupation and wrote down the industry instead. The occupations of the sample 208 respondents and the percentage of each category are presented in Figure 4.6.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No. of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business owner</td>
<td>4</td>
<td>1.92%</td>
</tr>
<tr>
<td>Director</td>
<td>8</td>
<td>3.85%</td>
</tr>
<tr>
<td>Senior Manager</td>
<td>35</td>
<td>16.83%</td>
</tr>
<tr>
<td>Consultant</td>
<td>7</td>
<td>3.37%</td>
</tr>
<tr>
<td>Engineer</td>
<td>19</td>
<td>9.13%</td>
</tr>
<tr>
<td>Teaching professionals (lecturers, teachers, tutors)</td>
<td>8</td>
<td>3.85%</td>
</tr>
<tr>
<td>Executives (officers, co-coordinator, assistance, etc.)</td>
<td>36</td>
<td>17.30%</td>
</tr>
<tr>
<td>Professionals (surgeon, CPA, surveyor, analyst, etc.)</td>
<td>14</td>
<td>6.73%</td>
</tr>
<tr>
<td>Retired</td>
<td>1</td>
<td>0.48%</td>
</tr>
<tr>
<td>Unanswered</td>
<td>7</td>
<td>3.37%</td>
</tr>
<tr>
<td>Occupations not specified</td>
<td>69</td>
<td>33.17%</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td><strong>208</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 4.6: Occupations of the Sample
4.3 Measurement Model

The measurement model presented in Figure 4.7 is evaluated by item loadings, scale reliabilities and construct’s validity. PLS assists to assess reliability and validity to calculate each scale’s indicators composite reliability (ICR) and average variance extracted (AVE) (Barclay, Thompson & Higgins, 1995; Chin, 1998). Composite reliability is computed by squaring the sum of loadings and then dividing it by the sum of squared loadings plus the sum of error terms (Werts, Linn & Joreskog, 1974). A composite reliability of 0.7 is sufficient for research; the same interpretation as using Cronbach’s alpha (Nunnally, 1978).

Figure 4.7: Measurement Model of This Study
Convergent and discriminant validity suggests that measures of the constructs are distinct and that indicators load on the appropriate construct (Messick, 1980). They are both considered subcategories of construct validity. If there is evidence demonstrating both convergent and discriminant validity, then by definition construct validity is established. However convergent and discriminant validity work together and either one alone is insufficient for establishing construct validity. The two are inter-locking propositions. Convergent validity is performed to demonstrate measures of constructs that theoretically should be related to each other and that are observed to be related to each other, that is, to show a correspondence between similar constructs (Reichardt and Coleman, 1995). Discriminant validity is performed to demonstrate measures of constructs that theoretically should not be related to each other are observed to not be related to each other, that is, to discriminate between dissimilar construct.

Convergent and discriminant validity can be viewed as differences of ‘degree’ instead of differences in ‘kind’. To estimate the degree to which any two measures are related to each other the correlation coefficient can be used to reveal the patterns of intercorrelations among the measures (Campbell and Fiske, 1959). Correlations between theoretically similar measures should be ‘high’ while correlations between theoretically dissimilar measures should be ‘low’. In general, convergent correlations are desired to be as high as possible and discriminant ones to be as low as possible, and the convergent correlations should always be higher than the discriminant ones (Sarkar et al., 2001).

However, for this research the correlation between similar measures is low. This has negated the rationale to carry out discriminant validity tests. The correlation matrix in Table 4.1 provides evidence of the low correlations between measures.
If I had to do it all over again, I would choose the same Internet banking service of my bank.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.649(**)</td>
<td>.653(**)</td>
<td>.705(**)</td>
<td>.714(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.649(**)</td>
<td>1</td>
<td>.541(**)</td>
<td>.605(**)</td>
<td>.626(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

I am very satisfied with my choice of the Internet banking service.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.653(**)</td>
<td>.541(**)</td>
<td>1</td>
<td>.748(**)</td>
<td>.652(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

I feel good about my decision to choose this bank with regards to its Internet banking service.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.705(**)</td>
<td>.605(**)</td>
<td>.748(**)</td>
<td>1</td>
<td>.661(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

Internet banking at my bank has really pleased me.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.714(**)</td>
<td>.626(**)</td>
<td>.652(**)</td>
<td>.661(**)</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

I feel a sense of loyalty to my bank with regards to its Internet banking service.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.603(**)</td>
<td>.651(**)</td>
<td>.489(**)</td>
<td>.542(**)</td>
<td>.554(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

My bank holds me in high regard as a customer.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.338(**)</td>
<td>.365(**)</td>
<td>.362(**)</td>
<td>.404(**)</td>
<td>.390(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

My bank can be relied upon to keep their promises and service pledge.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.336(**)</td>
<td>.416(**)</td>
<td>.295(**)</td>
<td>.471(**)</td>
<td>.352(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

I trust this bank.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.447(**)</td>
<td>.469(**)</td>
<td>.354(**)</td>
<td>.500(**)</td>
<td>.451(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

My bank is interested in my satisfaction.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.204(**)</td>
<td>.216(**)</td>
<td>.194(**)</td>
<td>.233(**)</td>
<td>.215(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.003</td>
<td>.002</td>
<td>.005</td>
<td>.001</td>
<td>.002</td>
</tr>
</tbody>
</table>

I feel like there is a ‘bond’ between my bank and myself.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.264(**)</td>
<td>.380(**)</td>
<td>.159(**)</td>
<td>.294(**)</td>
<td>.287(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.022</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

I am very committed to my relationship with my bank.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.272(**)</td>
<td>.395(**)</td>
<td>.155(**)</td>
<td>.269(**)</td>
<td>.292(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.026</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

I should put maximum effort to maintain the relationship with my present bank.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>If I had to do it all over again, I would choose the same Internet banking service of my bank.</th>
<th>In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</th>
<th>I am very satisfied with my choice of the Internet banking service.</th>
<th>I feel good about my decision to choose this bank with regards to its Internet banking service.</th>
<th>Internet banking at my bank has really pleased me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.233(**)</td>
<td>.312(**)</td>
<td>.067</td>
<td>.135</td>
<td>.178(*)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.000</td>
<td>.052</td>
<td>.010</td>
<td>.049(*)</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
<table>
<thead>
<tr>
<th>Construct 1</th>
<th>Construct 2</th>
<th>Construct 3</th>
<th>Construct 4</th>
<th>Construct 5</th>
<th>Construct 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel a sense of loyalty to my bank with regards to its Internet banking service.</td>
<td>0.603**</td>
<td>0.338**</td>
<td>0.336**</td>
<td>0.447**</td>
<td>0.204**</td>
</tr>
<tr>
<td>My bank holds me in high regard as a customer.</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>My bank can be relied upon to keep their promises and service pledge.</td>
<td>0.651**</td>
<td>0.365**</td>
<td>0.416**</td>
<td>0.469**</td>
<td>0.216**</td>
</tr>
<tr>
<td>I trust this bank.</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>My bank is interested in my satisfaction.</td>
<td>0.489**</td>
<td>0.362**</td>
<td>0.296**</td>
<td>0.354**</td>
<td>0.194**</td>
</tr>
<tr>
<td>I feel like there is a 'bond' between my bank and myself.</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>I am very committed to my relationship with my bank.</td>
<td>0.542**</td>
<td>0.404**</td>
<td>0.471**</td>
<td>0.500**</td>
<td>0.233**</td>
</tr>
<tr>
<td>I should put maximum effort to maintain the relationship with my present bank.</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 4.1: Correlation of the Constructs of This Study
4.4 Hypotheses Testing and Results Reporting

Founded on soft modelling philosophy, Partial Least Square (PLS) analytical technique can identify the mediators and provide multiple indices for the evaluation of the model rather than giving merely one fit index (Falk and Miller, 1992). Examples of fit indices are r-squared ($R^2$), average variance explained (AVE), averaged variance accounted (AVA) for regressions, weights and loadings (O’Cass, 2000). PLS is a powerful instrument for analysing structural models involving multiple constructs and multiple indicators, and it is increasingly popular for analysing and explaining different organisational phenomena in the marketing literature (Brock and Barclay, 1997; Sarkar, Echambadi, Cavusgil & Aulakh, 2001; O’Cass and Julian, 2003; White, Varadarajan & Dacin, 2003). In addition, it is advantageous for non-experimentalists owing to its ability to avoid multivariate normality assumptions (Kroonenberg, 1990), and the practicality of its application is recognised (Fornell and Bookstein, 1982).

The PLS technique is adopted in this research for rigorous analysis of the data collected from the survey. Justification for applying the PLS technique is that the method is good for understanding complex relationship (Fornell, Lorange & Roos, 1990). In this study, the joint effect and the mediating effect on different perceptions of customer behaviour in the context of Internet banking needed to be addressed and explained. Additionally, most covariance-based techniques require a sample size of over 200 whereas PLS is good for sample size ranges from 30 to 100 (Chin and Newstead, 1999). The sample size of this study, 208, which is relatively small, therefore PLS is chosen.
The survey questionnaire for this study contained a mixture of seven-point Likert-type scale questions on customer satisfaction, customer commitment and trust and questions on demographics. The items from 1 (strongly disagree) to 7 (strongly agree) on variables being tested were adapted to this context from established scales (Appendix II). The typical limitations are expressed about the advisability of deriving means from Likert-type scales, about inferring attitudinal dispositions as precursors to behaviour being researched, and about non-sampling errors created in the data collection stage. Sections 4.4.1 and 4.4.2 will present the analysis of these constructs and their results are summarised in Figure 4.8.

![Figure 4.8: Test Results of Constructs of This Study](image)

The sequence of the hypotheses took the pedagogical approach of commencing with single relationships and culminating with the overall final model for this thesis. All the hypotheses were tested by using PLS approaches due to its versatility of performing simultaneous relationships from a single path to in a holistic path analysis model.
4.4.1 Analysis on Independent Variable on the Dependent Variable

Hypothesis 1:

*There is a positive relationship between customer satisfaction and customer retention in the context of Internet banking.*

Hypothesis 1 determines to find out if satisfaction has an impact on Hong Kong professionals and business practitioners that would lead to customer retention in the context of Internet banking.

Customer satisfaction has a significant impact on repurchase intentions in a range of services (Cronin and Taylor, 1992; Patterson et al., 1997). Satisfaction increases customer retention (Oliver, 1980; Yi, 1990; Rust and Zahorik, 1993; Kotler, 1994). Satisfying customer needs and wants ensures repeat purchase (Kotler et al., 2002).

![Figure 4.9: Relationship between Customer Satisfaction and Customer Retention (H1)](image)

The PLS results in Figure 4.9 shows that satisfaction has a significant positive (path coefficient of 0.838) effect on customer retention in the context of Internet banking. The result confirmed that customer satisfaction has a positive impact on retention in the context of Internet banking. Thus, hypothesis 1 is supported.
This supports previous studies that show the importance of how satisfaction has a positive relationship with customer retention (Oliver, 1980; Yi, 1990; Rust and Zahorik, 1993; Kotler, 1994; Cronin and Taylor, 1992; Patterson et al., 1997; Kotler et al., 2002). With Internet banking, customers interact with a screen designed to offer various banking services via the Internet from their bank. The only thing customers can evaluate from Internet banking is how satisfied they are with the service. In other words, the importance of this exchange-based type of attribute overrides relational quality (such as personal relationship) in keeping customers with their bank (Anderson and Sulivan, 1993; Rucci et al., 1998; Bansal and Taylor, 1999; Cronin et al., 2000).

**Hypothesis 2:**

*There is a positive relationship between customer commitment and customer retention in the context of Internet banking.*

Hypothesis 2 proposes to find out if commitment has an impact on Hong Kong professionals and business practitioners that would lead to customer retention in the context of Internet banking.

Commitment implies that there are mutual benefits and that the parties involved want to stay in the relationship and are prepared to put in effort and investments in terms of monetary and psychological in maintaining the relationship (Morgan and Hunt, 1994). Commitment is positively related to repurchase intentions (Fullerton, 2005) and it was empirically proved to have a substantial negative effect on the propensity to leave (Norton, Gudergan & Young, 2004).
From the above negative significant path coefficient (-0.396) between customer commitment and retention depicted in Figure 4.10, it can be seen that the hypothesis (2) does not support previous findings that suggests customer commitment, as feelings of attachment to a vendor, helps to resist attempts at counter-persuasion from other vendors (Kiesler, 1971), and it is positively related to repurchase intentions (Fullerton, 2005).

Unlike the result of Hypothesis 1, customer commitment has no influence on customer retention. The result suggested that customer commitment has a negative impact on customer retention in the context of Internet banking. Thus, hypothesis 2 is not supported.

The influence of commitment on loyalty (and consequently repeat patronage) may be moderated by situational factors (Dick and Basu, 1994). That is to say even committed customers may not exert their loyalty to purchase goods or services from the firm if they have perceived that the environment is unsafe for a transaction. In addition, commitment, as a relational-type of attribute, may not function as effectively as a transactional-specific attribute (such as satisfaction) in retaining customer on the virtual marketing place.
**Hypothesis 3:**

*There is a positive relationship between trust and customer retention in the context of Internet banking.*

Hypothesis 3 is to test if trust has an impact on Hong Kong professionals and business practitioners that would lead to customer retention in the context of Internet banking.

Trust in a brand name has been cited as a crucial determiner when buying online (Sultan and Mooraj, 2001). In a low-customer-contact, mass-service setting, trust is regarded as an important driver of customer retention (Ranaweera and Prabhu, 2003a). Trust increases customer retention and repurchases; customer trust in a firm is the principal mediator between product or service attributes and customer retention (Garbarino and Johnson, 1999). Customer trust significantly contributes to sales growth through customer acquisition and retention (Intermarket Group, 2004).

![Figure 4.11: Relationship between Trust and Customer Retention (H3)](image)

The PLS results testing hypothesis 3 depicted in Figure 4.11 indicate that the trust factor does not lead to customer retention in the context of Internet banking (significant negative
path coefficient of -0.481). The result suggested that trust has a negative impact on customer retention. This indicates that the hypothesis (3) does not support previous findings that trust has a positive relationship with customer retention towards using the Internet banking service (Garbarino and Johnson, 1999). Thus, hypothesis 3 is not supported.

Trust generates feelings that tend to be self-relevant and is more an intrinsic quality that comes from within an individual who makes his or her own judgment (Ganesan, 1994; Selnes, 1998). Trust may not be appropriate for every situation (Nissenbaum, 2001), and from the results of this study, trust is suggested to be ineffective in retaining customers in Internet banking. This agrees with the arguments that it is impossible to build trust between virtual strangers because of the lack of evidence about one another which prevents the imputation of trustworthiness (Petit, 1999). Similar to commitment, trust is another type of relational attribute that may not function as effective as a transactional-specific attribute such as satisfaction in retaining customer on the virtual marketing place for banking.

**Hypothesis 4:**

*Customer retention is a function of customer satisfaction and trust in the context of Internet banking.*

Hypothesis 4 is designed to test the function of customer satisfaction and trust on customer retention.
Accumulated evidence indicates customer satisfaction does influence repurchase behaviour, but this evidence explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). A single satisfying transaction does not result in long term loyalty, nor does a single dissatisfying transaction lead to a customer switching (Reichheld, 1993). On the other hand, trust develops through past experience and prior interaction over time (Rempel et al., 1985; Grönroos, 1996; Curran et al., 1998). Consumers are vulnerable about the purchase especially when the purchasing decision is important to them, they will go for a trustworthy brand to eliminate the intrinsic risks (Delgado-Ballester and Munuera-Aleman, 2001).

![Diagram #4.12]

Figure 4.12: The Function of Customer Satisfaction and Trust on Customer Retention (H4)

If both satisfaction and trust are placed together leading to the considerations of customer retention (Figure 4.12), customer satisfaction, with a significant positive path coefficient of 0.826, would consider being a more important factor than trust leading to customer retention. Trust, with a negative coefficient of -0.023, indicates that it has a negative impact in the relationship on customer retention.
In the context of Internet banking, satisfaction plays an important role in retaining customers (proven in H1), and trust demonstrates that it decreases the importance of satisfaction in keeping customers using Internet banking. However, the overall effect of customer satisfaction and trust has a positive influence on customer retention. Thus, hypothesis 4 is supported.

This finding agreed with an empirical study indicating that the effect of satisfaction on retention was much stronger than the effect of trust among the UK fixed line telephone users (Ranaweera and Prabhu, 2003b). In the context of Internet banking the absence of face-to-face contact creates a feeling of uncertainty and risk for the customers (Reichheld and Schefter, 2000). Customers might need reassurance to release their personal data and preferences, and so banks have to provide evidence to show that they deserve to be trusted (Cappelli, 1999).

**Hypothesis 5:**

*Customer retention is a function of customer commitment and satisfaction in the context of Internet banking.*

Hypothesis 5 is designed to test the function of customer commitment and satisfaction on customer retention.

Studies have revealed that customer satisfaction has a measurable impact on purchase intentions (Bolton and Drew, 1991; Oliver, 1997; Anderson and Mittal, 2000; Estrin, 2005), customer retention (Anderson and Sullivan, 1993; Bolton, 1998; Mittal and Kamakura, 2001; Kumar, 2002; Estrin, 2005), and the financial performance of a bank.
(Rust and Zahorik, 1993; Leung et al., 1998; Anderson and Fornell, 1999; Keiningham et al., 1999). As a result, customer satisfaction is taken as a basic construct for monitoring and controlling marketing activities in the concept of relationship marketing (Anderson et al., 1994; Fornell, Johnson, Anderson & Bryant, 1996). It is argued that commitment in a business relationship goes beyond satisfaction, and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson et al., 1995).

If both customer commitment and satisfaction are placed together leading to the considerations of customer retention (Figure 4.13), customer satisfaction (significant positive path coefficient of 0.809) proved (H1) to have significant influence on customer retention, would consider being a more important factor than commitment. Commitment (negative coefficient of -0.078) indicates that it has a negative impact on the relationship on customer retention. Indeed, it decreases the influence of satisfaction on retention. However, the overall effect of customer commitment and satisfaction has a positive influence on customer retention in the context of Internet banking. Thus, hypothesis 5 is supported.
Commitment leading to loyalty and consequently repeat patronage may be moderated by situational or social factors (Dick and Basu, 1994). These factors may cause inconsistency in the commitment-loyalty relation. Since commitment differs from loyalty in that it refers solely to attitudes not behaviour (Kelly, Donnelly & Skinner, 1990), so even consumers are committed to a vendor, an unsafe or untrustworthy environment will decrease loyalty and inhibit consumers from repurchasing (Thatcher and George, 2004).

**Hypothesis 6:**

*Customer retention is a function of customer commitment and trust in the context of Internet banking.*

Hypothesis 6 is designed to test the function of customer commitment and trust on customer retention.

Trust in a firm’s website affects customers’ attitudes towards the firm and their willingness to buy (Keen, 1997; Wetsch and Cunningham, 1999). Online purchases depend on customer trust in the Internet, in specific websites, in the information available online, and in a firm’s delivery and service fulfilment (Urban et al., 2000). Commitment, when extended to consumer setting, is conceptualised as a force that binds a customer to continue to the services of the same service provider (Meyer and Herscovitch, 2001) even despite irregular influential events and marketing efforts that may cause switching behaviours (Curasi and Kennedy, 2002).
If both commitment and trust are placed together leading to the considerations of customer retention (Figure 4.14), both factors indicate a negative impact on customer retention. Trust, with a negative coefficient of -0.394, indicates a highly negative impact in the effect on customer retention. Commitment, with a negative coefficient of -0.135, also shows a negative impact in the effect on customer retention. Commitment and trust does not demonstrate any effect on retaining customers. In fact, both factors decrease the intention to stay with the bank with trust decreasing the overall effect. Internet banking customers do not need commitment and trust, in particular, to stay with the service provider. Thus, hypothesis 6 is not supported.

Trust online expressed by technical experts in security was a concern over the fragility of technical systems. These experts were concerned that the networked information system including the Internet is vulnerable to technical failure as well as malicious attack (Nissenbaum, 2001). Trust may not be appropriate for every situation and relationship. For example in dealing with a used-car salesman we may prefer strategies other than trust. So as in the selection of a bank, trust may not be crucial (Nissenbaum, 2001).
Hypothesis 7:

*Customer retention is a function of trust, customer satisfaction and commitment in the context of Internet banking.*

Hypothesis 7 is designed to test the function of trust, customer satisfaction and commitment on customer retention.

Repeat purchase depends on satisfying customer needs and wants (Kotler et al., 2002) whereas customer relationship marketing (CRM) applications are found to be positively related to improvements in customer satisfaction (Mithas et al., 2005). In the context of consumption, customers are subject to the vulnerability of the company’s decision and actions. This dimension infers that customers trust the vendor will not take advantage of their vulnerability in case of adverse circumstances (Delgado-Ballester, 2004).

![Diagram illustrating the functions of trust, customer satisfaction, and commitment on customer retention](image)

Figure 4:15: The Function of Trust, Customer Satisfaction and Customer Commitment on Customer Retention (H7)
If the three factors of trust, satisfaction and commitment are placed together leading to the considerations of customer retention (Figure 4.15), satisfaction with a coefficient of 0.822 becomes the most significant component leading to customer retention. Commitment (with a path coefficient of -0.097) and trust (with a low coefficient of 0.038) indicate a negative significant impact on customer retention.

Regarding the factors trust, satisfaction and commitment in relation to customer retention, only satisfaction shows its effectiveness in retaining Internet banking customers. Trust does not influence the intention of customers to retain with the bank, whereas commitment has a significant negative impact on customer retention. Thus, hypothesis 7 is not supported.

The model of the theory of reasoned action (TRA) posits that commitment is a direct antecedent to loyalty and Internet trustworthiness will negatively moderate the commitment-loyalty relation (Fishbein and Ajzen, 1975). This may explain the results of H7 that customer commitment does not make customers loyal in retaining with the same Internet banking service provider, and why trust does not help in customer retention.

### 4.4.2 Analysis on the Mediating Effects of Independent Variables on the Dependent Variable

Moderation occurs when the effect of one variable on another variable varies with different levels of a third variable whereas mediation occurs when the effect of one variable on another variable occurs via a third intervening variable (Judd and Kenny, 1981; Baron and Kenny, 1986). In this study, mediation is used to test the relationships
between the exogenous variables (in turns, customer satisfaction, customer commitment and trust) going through an intervening variable (in turns, customer satisfaction, customer commitment and trust) to the endogenous variable (customer retention). Mediation effects can be claimed if three conditions are met:

1. the independent variable significantly predicts the dependent variable;
2. the independent variable significantly precuts the mediator variable; and
3. when the dependent variable is regressed on both the mediator and the independent variable, the mediator significantly predicts the dependent variable, while the predictive utility of the independent variable is reduced.

However, only Conditions 2 and 3 are essential for the demonstration of mediation effects (Kenny, Kashy & Bolger, 1998). The correlation between the mediator and the dependent variable is not sufficient evidence of mediation because both may be caused by the independent variable (Kenny et al., 1998).

**Hypothesis 8:**

*Customer commitment is mediated by trust to build customer retention in the context of Internet banking.*

Hypothesis 8 is designed to investigate if customer commitment depends on trust to build customer retention.

Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Adapted from the definitions in conventional commerce, customer trust in e-commerce has been defined as ‘a willingness to take risk’ (Lee and Turban, 2001; Ba and Pavlou, 2002), ‘a willingness to believe the trustee’ (Fung and Lee, 1999), or ‘a belief concerning certain characteristics of the trustee’ (Stewart, 1999).
The PLS results in Figure 4.16 indicate that trust weakly mediates commitment to enhance customer retention. This is evidenced by the direct effect with the path coefficient of -0.153, which is greater than the indirect effect with the path coefficient of -0.238. The result is further indicated by the total effect with the path coefficient of -0.391 which is lesser than the direct effect (-0.153).

The finding suggests that commitment cannot influence customer retention in the context of Internet banking. When trust is built between commitment and customer retention regarding Internet banking with the objective in enhancing the relationship, it does not
shed positive light. By mediating trust in the relationship, the total effect becomes further negative. This shows that trust does not provide an effective mediation between commitment and retention. As such, trust does not enhance the relationship between a committed customer and retention. Thus, hypothesis 8 is not supported.

Commitment leading to loyalty and resulting in repeat purchases may be moderated by situational or social factors (Dick and Basu, 1994). Security beliefs as one of the moderators reflect perceptions of safety or trust in the environment encompassing a business transaction. This may cause inconsistency in the commitment-loyalty relationship (Hoffman et al., 1998). Consequently committed customers may not repurchase if they do not feel safe in an unfavourable environment.

**Hypothesis 9:**

*Customer satisfaction is mediated by trust to build customer retention in the context of Internet banking.*

Hypothesis 9 is designed to investigate if customer satisfaction depends on trust to build customer retention.

The relationship between satisfaction and customer retention has been empirically validated by many scholarly works studying the service sector (Anderson and Sullivan, 1993; Rucci et al., 1998; Bansal and Taylor, 1999; Cronin et al., 2000). However, trust has been suggested as an antecedent to satisfaction (Singh and Sirdeshmukh, 2000). It has been cited that the absence of customer trust in an online firm’s competence and integrity
is the major hurdle to the enjoyment of e-commerce benefits (Keen, 1997; Ratnasingham, 1998; Ba et al., 1999; Brynjolfsson and Smith, 2000).

![Diagram of Customer Satisfaction, Trust, and Retention]

Direct Effect (DE) = 0.831 (significant)
Indirect Effect (IE) $0.554 \times 0.015 = 0.00831$ (not significant)
Total Effect (TE) $0.831 + 0.00831 = 0.83931$ (significant)

Figure 4.17: Customer Satisfaction Depends on Trust to Build Customer Retention (H9)

The finding depicted in Figure 4.17 suggests that satisfaction has a positive impact on customer retention (path coefficient of 0.831). Satisfaction also has influence on trust (significant positive coefficient of 0.554). However, when trust is built between satisfaction and customer retention in the regards of Internet banking with the objective in enhancing the relationship, it does not shed positive light. The result suggested that trust
does not provide an effective mediation between satisfaction and retention. Indeed, trust, with a path coefficient of 0.015, has a negative impact in enhancing the relationship between a satisfied customer and retention. Thus, hypothesis 9 is not supported.

In the context of Internet banking, the absence of face-to-face contact creates a feeling of uncertainty and risk for customers (Reichheld and Schefter, 2000). Research suggests that when the context is uncertain, individuals demonstrate less attitude-behaviour consistency (Gross, Holtz & Miller, 1995). That is to say even though customers trust Internet banking they may not continue to use the service.

**Hypothesis 10:**

*Customer satisfaction is mediated by customer commitment to build customer retention in the context of Internet banking.*

Hypothesis 10 is designed to investigate if customer satisfaction depends on customer commitment to build customer retention.

An empirical study reveals that strong interpersonal relationships positively influence a customer's intention to repurchase in the case of low-customer satisfaction (Jones et al., 2000). The implication is that satisfaction is a condition that contributes to a customer’s opting for a product or service but satisfaction alone is not sufficient to make a customer commit to the product or service (Wilson and Mummalaneni, 1990). In addition, customer relationship management applications have been suggested to result in improvements in customer knowledge and customer satisfaction (Mithas et al., 2005).
Direct Effect (DE) = 0.815 (significant)
Indirect Effect (IE) -0.368 * -0.07 = 0.02576 (not significant)
Total Effect (TE) 0.815 + 0.02576 = 0.84076 (significant)

Figure 4.18: Customer Satisfaction Depends on Customer Commitment to Build Customer Retention (H10)

In Figure 4.18 satisfaction alone has a significant impact on customer retention (path coefficient of 0.815). However, it has negative influence on commitment (path coefficient of -0.386). However, when satisfaction is mediated by commitment for customer retention regarding Internet banking with the objective of enhancing the relationship, it does not shed positive light. The indirect effect is much smaller than the direct effect. Indeed, commitment, with a path coefficient of -0.07, decreases the impact in enhancing the relationship between a satisfied customer and retention. The result suggested that commitment does not provide an effective mediation between satisfaction and retention. Thus, hypothesis 10 is not supported.
The result indicates that the hypothesis (10) does not support previous findings (Jones et al., 2000) that commitment has a positive relationship with customer retention towards using an Internet banking service. The result suggested that commitment has a negative impact on customer retention. Repurchasing behaviour may be more a function of such environmental constraints as happenstance or convenience rather than loyalty (Jacoby and Chesnut, 1978). Moreover, commitment differs from loyalty in that it refers solely to attitudes; it does not involve behaviour (Kelly, Donnelly & Skinner, 1990).

Hypothesis 11:

The effect of customer commitment on customer retention is mediated by customer satisfaction and trust in the content of Internet banking.

The objective of hypothesis 11 is to identify whether trust and satisfaction mediated by commitment has an impact on Hong Kong professionals and business practitioners in enhancing customer retention in the context of Internet banking.

Satisfaction is a condition that contributes to a customer’s opting for a product or service but satisfaction alone is not sufficient to make a customer commit to the product or service (Wilson and Mummalaneni, 1990). It has been proposed that affective, normative and continuance commitment mediates the relationship between switching intentions and antecedents such as satisfaction (Bettencourt, 1997, Wetzels et al., 1998; Garbarino and Johnson, 1999; Wetzels et al., 2000; Hennig-Thurau et al., 2002).

One empirical study has revealed that there is an indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000). This link suggests that strong
interpersonal relationships positively influence a customer’s intention to repurchase in case of low customer satisfaction. If the inability to keep satisfied customers is partly due to the absence of customer commitment, then this suggests that commitment may act as a mediator to satisfaction in strengthening customer retention. Commitment also mediates the relationship between repurchase intentions and various variables, including trust (Garbarino and Johnson, 1999). In addition, trust has been claimed to have a mediating role for other variables in different research models.

![Diagram of customer satisfaction and trust via customer commitment on customer retention](image)

**Figure 4:19: Customer Satisfaction and Trust via Customer Commitment on Customer Retention (H11)**
Figure 4.19 demonstrates that satisfaction has a significant positive path coefficient towards retention (0.835). Commitment on satisfaction also has a significant path coefficient of 0.395. The mediation of satisfaction for commitment seems to have a significant path towards customer retention.

Commitment on trust has a significant path coefficient of 0.663; and commitment itself has a positive path coefficient of 0.090 towards customer retention. However, when mediated by trust, commitment demonstrates a non-significant impact on customer retention, with a path coefficient of -.055.

The $R^2$ is indicated next to each construct. All links are found to be significant except for the one between trust and retention. It is interesting to note that the overall model explains 71.1 percent of the variance in retention and, as such, providing strong evidence of its explanatory power.

The observation has been made that customer satisfaction is a very effective mediator for customer commitment on customer retention in the context of Internet banking. However, on the other hand, trust demonstrates its ineffectiveness as a mediator for customer commitment on customer retention. In fact, trust decreases the impact of customer commitment on customer retention. The hypothesized effect of customer commitment on customer retention is mediated by customer satisfaction and trust in the context of Internet banking partially stands. Thereby $H11$ is partially supported.
Customer satisfaction can be viewed as the incorporation of an emotional state and an evaluative judgement. Evaluative responses related to the perceived outcomes of customer experience during the course of acquisition, consumption and disposition of the purchase (Miller, 1977; Westbrook and Oliver, 1981), and customers develop feelings of positive affect through experience with a vendor (Dick and Basu, 1994). Overall satisfaction is gathered from factors occurring through the transaction process (Bitner and Hubbert 1994; Oliver, 1997). Therefore, satisfaction for Internet banking is an inward experience of the customers.

Customer commitment and trust, however, are values that could be affected by external factors or environments. Even though customers may have experience with a vendor, the continual concerns about the ‘atmosphere’ surrounding a transaction will moderate relations between emotions, beliefs, and attitudes (Long, Hogg, Hartley & Angold, 1999). Empirical results support that trust and other security beliefs have an effect on consumers’ intent to purchase goods over the web (Jones and Vijasarathy, 1998). To committed customers, an unsafe or untrustworthy environment will reduce their expression in loyalty (Thatcher and George, 2004), that is the behaviour of repeating purchase from the same vendor.

The professionals and business practitioners in this study may also possess certain characteristics that make them sceptical about commitment and trust in the continued use of a service or product. A recent finding of a study on mobile Internet adopters in Japan suggested that highly educated professionals working freelance had the most negative perception of mobile Internet adoption (Okazaki, 2006). This may explain why trust
does not have an effect on customer retention in the context of Internet banking among Hong Kong professionals and business practitioners.

In addition, a study identified that households who value time the most, have higher education and earn higher incomes were expected to have more cards; well-educated, high-income and time-poor Hong Kong professionals and business practitioners may have several Internet banking accounts in use. This could imply that Hong Kong professionals and business practitioners have no solidified commitment. This phenomenon agrees with a study reporting that some customers are not naive towards relational strategies launched by firms (Egan, 1999).

4.5 Summary of Hypotheses Testing

Table 4.2 summarises the results of the testing of the eleven hypotheses and identifies the path coefficients between the exogenous and endogenous variables, p-value, t-value and r-square ratios. Out of the eleven hypotheses, three are fully supported, one partially supported and seven are not supported after rigorous analysis with SPSS and PLS techniques on the data collected from the survey.
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Statistical Test</th>
<th>p-value / t-value / R²</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1:</strong> Internet banking is positively perceived by satisfied customers who will continue to use the service of their bank.</td>
<td>Significant path coefficient</td>
<td>P = 0.000</td>
<td><strong>Supported</strong></td>
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<td></td>
<td></td>
<td>S-R = 0.838</td>
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<td></td>
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<td>(t = 35.8409)</td>
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<td></td>
<td>R²=0.703</td>
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<tr>
<td><strong>H2:</strong> Internet banking is positively perceived by committed customers who will continue to use the service of their bank.</td>
<td>Significant path coefficient</td>
<td>P = 0.000</td>
<td><strong>Not supported</strong></td>
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<td></td>
<td></td>
<td>C-R = -0.396</td>
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<td></td>
<td></td>
<td>(t = 6.2404)</td>
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<td></td>
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<td>R²=0.157</td>
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<td><strong>H3:</strong> Internet banking is positively perceived by customers who trust the service and will continue to use the service of their bank.</td>
<td>Significant path coefficient</td>
<td>P = 0.000</td>
<td><strong>Not supported</strong></td>
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<td></td>
<td></td>
<td>T-R = -0.481</td>
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<td>(t = 6.7875)</td>
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<td></td>
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<td>R²=0.232</td>
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<td><strong>H4:</strong> The function of customer satisfaction and trust has a positive influence on customer retention in the context of Internet banking.</td>
<td>Significant path coefficient</td>
<td>P = 0.000</td>
<td><strong>Supported</strong></td>
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<td></td>
<td></td>
<td>S-R = 0.826(***)</td>
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<td>(t = 24.8386)</td>
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<td></td>
<td>T-R = -0.023(*)</td>
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<td></td>
<td>(t = 0.4666)</td>
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<td></td>
<td>R²=0.703</td>
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<td><strong>H5:</strong> The function of customer commitment and satisfaction has a positive influence on customer retention in the context of Internet banking.</td>
<td>Significant path coefficient</td>
<td>P = 0.000</td>
<td><strong>Supported</strong></td>
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<td></td>
<td></td>
<td>C-R = -0.078(*)</td>
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<td>(t = 1.8624)</td>
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<td></td>
<td>S-R = 0.809(***)</td>
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<td>(t = 28.6952)</td>
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<td>R²=0.707</td>
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<td><strong>H6:</strong> The function of customer commitment and trust has a positive influence on customer retention in the context of Internet banking.</td>
<td>Significant path coefficient</td>
<td>P = 0.000</td>
<td><strong>Not supported</strong></td>
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<td>C-R = -0.135(NS)</td>
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<td>(t = 1.2883)</td>
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<td></td>
<td>T-R = -0.394(***)</td>
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<td>(t = 3.5426)</td>
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<td>R²=0.243</td>
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<tr>
<td><strong>H7:</strong> The function of trust, customer satisfaction and commitment has a positive influence on customer retention in the context of Internet banking.</td>
<td>Significant path coefficient</td>
<td>P = 0.000</td>
<td><strong>Not supported</strong></td>
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<td>T-R = 0.038(NS)</td>
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<td>(t = 0.6335)</td>
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<td>S-R =0.822(***)</td>
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<td>(t = 25.2547)</td>
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<td></td>
<td></td>
<td>C-R =-0.097(*)</td>
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<td>(t = 1.7497)</td>
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<td>R²= 0.708</td>
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<tr>
<td>Hypothesis</td>
<td>Path Coefficient</td>
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<tr>
<td>H8: Customer commitment is mediated by trust to build</td>
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<td>customer retention in the context of Internet banking.</td>
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<tr>
<td>P = 0.000</td>
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<tr>
<td>C-R = -0.153(*)</td>
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<td>(t = 1.4417)</td>
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<tr>
<td>C-T = 0.663(**)</td>
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<td>(t = 15.2964)</td>
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<tr>
<td>T-R = -0.359(**)</td>
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<td>(t = 3.1037)</td>
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<tr>
<td>R² = 0.225</td>
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<tr>
<td>H9: Customer satisfaction is mediated by trust to build</td>
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<tr>
<td>customer retention in the context of Internet banking.</td>
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<tr>
<td>P = 0.000</td>
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<tr>
<td>S-R = 0.831(**)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(t = 25.9118)</td>
<td></td>
<td></td>
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<tr>
<td>S-T = 0.554(**)</td>
<td></td>
<td></td>
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<tr>
<td>(t = 9.1840)</td>
<td></td>
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<tr>
<td>T-R = 0.015(NS)</td>
<td></td>
<td></td>
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<tr>
<td>(t = 0.3095)</td>
<td></td>
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<td></td>
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<tr>
<td>R² = 0.795</td>
<td></td>
<td></td>
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<tr>
<td>H10: Customer satisfaction is mediated by customer</td>
<td></td>
<td></td>
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<tr>
<td>commitment to build customer retention in the context of</td>
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<tr>
<td>Internet banking.</td>
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<tr>
<td>P = 0.000</td>
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<td></td>
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<tr>
<td>S-R = 0.815(***)</td>
<td></td>
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</tr>
<tr>
<td>(t = 28.3649)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>S-C = -0.386(**)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(t = 6.9466)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-R = -0.07(0.05)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(t = 1.5643)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>R² = 0.712</td>
<td></td>
<td></td>
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<tr>
<td>H11: The effect of customer commitment on customer</td>
<td></td>
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<tr>
<td>retention is mediated by customer satisfaction and trust in</td>
<td></td>
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<td></td>
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<tr>
<td>the content of Internet banking.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P = 0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-R = 0.835(***)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(t = 26.8450)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-S = 0.395(***)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(t = 6.7303)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-T = 0.663(***)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(t = 15.3690)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>T-R = 0.055(NS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(t = 0.9196)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>C-R = 0.090(0.05)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(t = 1.5899)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>R² for R = 0.711</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R² for S = 0.156</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R² for T = 0.44</td>
<td></td>
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</tr>
</tbody>
</table>

* significant at 0.05
** significant at 0.01
*** significant at 0.001

Table 4.2: Summary of Hypotheses Testing
4.5.1 The Final Model of This Research with PLS Results

The exogenous variables (customer satisfaction and trust) going through an intervening variable (customer commitment) to the endogenous variable (customer retention) are depicted in Figure 4.20. It also diagrammatically represents the final model of this research with PLS results. The construct of the overall Internet banking model was conceptualised as reflective measurement model. The loadings from the figure below and critical ratios obtained from bootstrapping were used to understand this construct.

(Independent Variable)
Satisfaction

0.835(***)

Commitment
0.049(NS)

Trust
(Independent Variable)

0.637(***)

0.056(NS)

Retention
R² = 0.711

R² = 0.441(NS)

NS non-significant
* significant at 0.01
** significant at 0.05
*** significant at 0.001

Figure 4.20: Final Model with PLS Results
A direct effect of an exogenous variable on an endogenous variable is represented by a coefficient computed from cause to effect following the arrows in the headed direction, whereas an indirect effect is the effect of an exogenous variable on an endogenous variable through the effect on a third intervening (mediating) variable. The indirect effect is represented by a coefficient obtained by multiplying the coefficients along an indirect route from cause to effect following the path of arrows in the headed direction. As the conceptual model is one-tailed in nature, the critical ratios, determined by the Bootstrap Method are as follows:

- 1.645 is significant at the .05 level
- 2.326 is significant at the 0.01 level
- 3.090 is significant at the 0.001 level

The construct of overall customer commitment was conceptualized as a reflective measurement model. The loadings from Figure 4.20 and critical ratios obtained from bootstrapping were used to understand this construct.

### 4.5.2 Data Analysis Reporting

The data analysis for this survey was conducted and completed in a holistic manner following the PLS procedure (Wold, 1989) and using PLS Graph (Chin, 1994). PLS tested how well the measures relate to each construct simultaneously with whether the hypothesized relationships at the theoretical level are empirically confirmed. Tests of significance for all paths were conducted using the bootstrap re-sampling procedure (Cotterman and Senn, 1992) and the standard approach for evaluation that requires path loadings from construct to measures to exceed 0.70. Internal consistency test was
performed using composite reliability measures ($\rho$) (Chin, 1998) and average variance extracted (AVE) (Fornell and Larcker, 1981).

Several tests on the measurement model to examine its validity and reliability were performed and the results were satisfactory. Table 4.3 presents the loading of the measures to their respective constructs along with the composite reliability scores, AVE scores, standard errors and t-statistics. All items are significant at the 0.01 level with high loading (all above 0.79), therefore demonstrating convergent validity. Moreover, all AVE scores exceed 0.7. The composite reliability scores of all constructs are higher than the recommended value of 0.80 (Nunnally, 1978), demonstrating internal consistency.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Variables</th>
<th>Loadings</th>
<th>Std. Error</th>
<th>T-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>Item 1: Satisfied with the choice</td>
<td>0.8410</td>
<td>0.0281</td>
<td>29.8916</td>
</tr>
<tr>
<td>Composite</td>
<td>Item 2: Good choice</td>
<td>0.8720</td>
<td>0.0330</td>
<td>26.4104</td>
</tr>
<tr>
<td>Reliability = 0.905</td>
<td>Item 3: Pleased me</td>
<td>0.8548</td>
<td>0.0251</td>
<td>34.0644</td>
</tr>
<tr>
<td>AVE = 0.706</td>
<td>Item 4: Sense of loyalty</td>
<td>0.7902</td>
<td>0.0346</td>
<td>22.8110</td>
</tr>
<tr>
<td>Retention</td>
<td>Item 1: Do it all over again</td>
<td>0.9153</td>
<td>0.0156</td>
<td>58.6501</td>
</tr>
<tr>
<td>Composite</td>
<td>Item 2: Recommend to friends</td>
<td>0.9004</td>
<td>0.0207</td>
<td>43.4885</td>
</tr>
<tr>
<td>Reliability = 0.904</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE = 0.824</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Trust</td>
<td>Item 1: High regard</td>
<td>0.8625</td>
<td>0.0201</td>
<td>42.9236</td>
</tr>
<tr>
<td>Composite</td>
<td>Item 2: Keep their promise</td>
<td>0.8984</td>
<td>0.0148</td>
<td>60.5488</td>
</tr>
<tr>
<td>Reliability = 0.910</td>
<td>Item 3: Trust this bank</td>
<td>0.8166</td>
<td>0.0299</td>
<td>27.2779</td>
</tr>
<tr>
<td>AVE = 0.718</td>
<td>Item 4: Interested in my satisfaction</td>
<td>0.8090</td>
<td>0.0384</td>
<td>21.0514</td>
</tr>
<tr>
<td>Commitment</td>
<td>Item 1: Bond between my bank</td>
<td>0.8904</td>
<td>0.0204</td>
<td>43.6006</td>
</tr>
<tr>
<td>Composite</td>
<td>Item 2: Committed to my relationship</td>
<td>0.9335</td>
<td>0.0096</td>
<td>97.3875</td>
</tr>
<tr>
<td>Reliability = 0.917</td>
<td>Item 3: Put maximum effort</td>
<td>0.8334</td>
<td>0.0595</td>
<td>14.0087</td>
</tr>
<tr>
<td>AVE = 0.786</td>
<td></td>
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</tbody>
</table>

Table 4.3: Measurement Model Statistics
The results of the PLS analysis are illustrated in Figure 4.20 (Final Model). The test of each link is mapped with each specific path in the structural model. The estimated path coefficients are provided with their respective t-statistics. Solid lines represent significant links between constructs and dotted lines denote insignificant relationships between the variables.

### 4.6 Conclusion

The finding of the demographic characteristics (gender, marital status, age, education, income, working experience and occupation) of the respondents in this survey revealed that the sample closely represents the population under study. However, the sample of Hong Kong professionals and business practitioners had attained an education well above the overall standard and earned more than the average worker.

The relationships between constructs being tested in this study with the help of diagrams are presented. It was found that satisfaction has a significant positive impact on customer retention, customer commitment and trust do not have or have negative effect on customer retention nor they can mediate customer satisfaction on customer retention in the context of Internet banking in Hong Kong. This chapter finishes with the summaries of the hypotheses testing and depicts the final structural research model demonstrating the interacting effects of all the constructs involved in this study.
CHAPTER 5 CONCLUSIONS

5.1 Introduction

This chapter concludes the research project. Section 5.1 introduces the sections in the chapter. Section 5.2 focuses on the discussion and interpretation of the findings. This is followed in Section 5.3 by the implications for research results. The implications for practitioners are in Section 5.4. Section 5.5 presents the limitations of this study whereas Section 5.6 recommends directions for future studies. Section 5.7 concludes the chapter.

5.2 Discussion and Interpretation of the Findings

The final research model in Figure 4.20 of this study was postulated using PLS graph (Chin and Frye, 1996). With 208 respondents, the sample size satisfied the indicator to case ratio required to use PLS (Barclay, Thompson & Higgins, 1995). The findings were interpreted in two stages - demographics of the sample and structural.

5.2.1 Demographics of the Sample

An earlier study found that the demographic profile of Internet banking users in Hong Kong was similar to the demographic profile of Hong Kong general population (Iamasia, 2002). Based on the reference, the demographic profile of the respondents of this research was compared with that of Hong Kong population. The demographic data demonstrated adequate representation of the population regarding gender, marital status, age range, and
education level of Hong Kong. However, the government statistics were not consistent with the income of the professionals and business practitioners in this study. This finding could be interpreted as the sample Hong Kong professionals and business practitioners in this study earn well above the overall income standard. As such the sample of this survey is a fair and adequate representation of the population of Hong Kong.

5.2.2 Structural Model

Results revealed in Figure 4.20 provide limited empirical support for the theoretical model. PLS structural model results may be interpreted as regression analysis. Each $R^2$ indicates the amount of variance explained in the latent construct (Barclay, Thompson & Higgins, 1995). Path coefficients can be taken as standardized betas deriving from ordinary least squares regression. To test the statistical significance of the path coefficients, a bootstrapping procedure was used to generate 100 samples of the 208 respondents. Followed by a $t$ test for differences (degrees of freedom = 99) between the full sample and mean of sub-samples was performed (Chin, 1998). Path coefficients between the constructs and their significance are shown in Figure 4.20. Overall, the model explained a large amount of the variance in customer retention ($R^2 = 0.711$). Hypotheses will be discussed next.

5.2.2.1 Customer Retention and Its Antecedents

The research model proves strong empirical support for how satisfaction leads to customer retention. The satisfaction factor explained large amounts of variance in customer retention ($R^2=0.703$). A hypothesized relation from satisfaction to customer retention was supported ($H1$: $p>.01$). When compared to commitment and trust, customer
satisfaction demonstrated a much stronger relation to the two factors. This analysis suggests that customer satisfaction with Internet banking services is an important antecedent to customer retention.

Commitment did not demonstrate a positive relation to customer retention. A hypothesized relation from customer commitment to customer retention was not supported (H2: p<.01). The analysis showed that customer commitment has a negative influence on customer behaviour in terms of keeping them using an Internet banking service. This finding is inconsistent with prior marketing research suggesting the implementation of effective relationship-specific investments can increase customers’ dependency and inhibiting switching (Berry and Parasuraman, 1991).

Similarly, trust has a negative impact on customer behavior in the context of Internet banking. A hypothesized relation from trust to customer retention was not supported (H3: p<.01). The result was not consistent with prior marketing research suggesting that the upkeep of trust in an online environment is critically important, especially in a highly unpredictable market with reduced product differentiation such as banking (Fournier and Yao, 1997; Urban et al., 2000; Papadopoulou et al., 2001).

5.2.2.2 Effect on Customer Retention

Hypotheses 4, 5, 6 and 7 predicted a positive effect of satisfaction and trust on customer retention (H4), commitment and satisfaction on customer retention (H5), commitment and trust on customer retention (H6) and trust, satisfaction and commitment on customer retention (H7).
The satisfaction factor explained large amounts of variance in customer retention in all the three models it involved in (H4: R² = .703, p>.01; H5: R² = .707, p>.01; H7: R² = .708, p>.01). Trust and satisfaction, exercised a negative influence (H4: p<0.01, R² = .703). However, the influence of the satisfactory factor was so strong, leading to a positive overall effect, thereby lending support to H4.

Similarly, commitment and satisfaction exercised a negative influence (H5: p<0.1). Again, the influence of the satisfactory factor was very strong, leading to a positive overall effect, and thereby giving support to H5 (R² = .707).

Commitment (p<0.1) and trust (p<0.1) showed a negative influence on customer retention. Thereby a hypothesized relation from trust and commitment on customer retention proposed in H6 is rejected. In addition, these two factors explained small amounts of variance in customer retention (R² = .243).

Trust (p<0.1), satisfaction (p>.01) and commitment (p<0.1) on customer retention revealed an overall negative influence despite the satisfaction factor alone exerting a positive influence. Thereby H7 is rejected. In addition, the model explained large amounts of variance in customer retention (R² = .708).

5.2.2.3 Interaction Terms on Customer Retention

Interaction terms were calculated for the effect on customer retention from commitment via a mediating factor, trust (H8); from satisfaction via a mediating factor, trust (H9); satisfaction via a mediating factor, commitment (H10), and commitment via mediating factors, satisfaction and trust (H11).
A direct effect of an exogenous variable on an endogenous variable is represented by a coefficient computed from cause to effect following the arrows in the headed direction whereas an indirect effect is the effect of an exogenous variable on an endogenous variable through the effect on a third (media) intervening (mediating) variable. The indirect effect is represented by a coefficient obtained by multiplying the coefficients along an indirect route from cause to effect following the path of arrows in the headed direction. The total effects of the exogenous variables on the endogenous variable are reflected by the sum of the direct and indirect effect.

In H8, the direct effect is positive, however the indirect effect becomes negative and the total effect is further negative. This indicates that trust weakly mediates commitment to enhance customer retention. Thereby H8 is not supported.

In H9, the direct effect is greater than the indirect effect and the total effect bounced back to more or less the same value of the direct effect. The observation was made that trust did not have an effective mediation between satisfaction and customer retention. Thereby, H9 is not supported.

In H10, the direct effect is greater than the indirect effect and the total effect has the smallest value. The observation is made that satisfaction alone has a more important impact on customer retention whereas commitment, as a media, decreases satisfaction’s positive impact on customer retention. This indicates that commitment negatively mediates satisfaction to enhance customer retention. Thereby H10 is not supported.

In H11, commitment has a positive influence on customer retention; it has a significant effect on satisfaction as well as on trust. The mediation of satisfaction for commitment
has a significant effect on customer retention. However the mediation of trust for
commitment demonstrates a negative impact on customer retention. The observation is
made that customer satisfaction is very effective in mediating customer commitment in
retaining customers in the context of Internet banking. However, on the other side,
customer commitment becomes negative when mediated by trust on customer retention.
Thus, the effect of customer commitment on customer retention is mediated by customer
satisfaction and brand trust in the context of Internet banking partially stands. Thereby
H11 is partially supported.

5.3 Implication for Research

Grounded in the marketing literature, a theoretical model of customer retention in the
context of Internet banking was developed for research. Exploratory analysis did not
support the model’s hypothesized relations in the context of Internet banking. Trust did
not augment the relation to customer retention; commitment demonstrated a weak,
insignificant relation to customer retention; and the sole factor, satisfaction, performs
significantly on customer retention in the context of Internet banking. Satisfaction can be
viewed as an evaluation judgement and a response rendered from the supposition of the
purchase experience (Czepiel et al., 1974; Engel and Blackwell, 1982). The findings
suggested that research investigates what antecedents lead to satisfying customers for
banking online.

The findings have several implications for research. A major implication of this study
concerns the relational attributes of commitment and trust on retaining customers for
Internet banking. Previous studies on Internet banking have focused on such
transaction-specific attributes as satisfaction and switching costs for customer retention (Lee et al., 2001; Ranaweera and Prabhu, 2003a). In this study, the scope of research was extended beyond transactional type of attributes to examine relationship-specific attributes, namely commitment and trust. This finding suggested that commitment and trust as relationship-specific attributes may not apply for banking over the Internet.

Commitment leading to loyalty (and consequently repeat patronage) may be moderated by situational or social factors (Dick and Basu, 1994). Actual or perceived conditions were moderators influencing a consumer’s motivation to buy goods or services from a vendor. Security beliefs were important moderators being identified and they reflected perceptions of safety or trust in the environment encompassing a business transaction, and may be the rationale of inconsistency in the commitment-loyalty relation. Even if consumers are committed to a vendor, an unsafe or untrustworthy environment will decrease loyalty and influence behaviour accordingly.

In the consumer-brand domain, trust has been described as the willingness of consumers to rely on the capability of the brand to act on the promises it has pledged to fulfil (Chaudhuri and Holbrook, 2001). However, it was arguable to incorporate the behavioural intention of ‘willingness’ of consumers to reply on the capability of the brand to act on the promises it has claimed to fulfil (Morgan and Hunt, 1994). In addition, the brand could not be regarded as an active relationship partner responding to customers similar to people (Delgado-Ballester, 2004).

The ignorance of trust on the part of customers may be due to the fact that they take Internet banking only as a function whereas the intent to retain with the service provider is not involved. It was revealed in a longitudinal research that loyalty intentions are a
function of perceived value in early customer life cycle. Only in the later stages of the
customer life cycle, more affective attitudes (willingness to retain with a company)
toward the brand and the relationship with the company come to mediate the effects of
value on intentions (Johnson, Herrmann & Huber, 2006). The findings suggested research
into measuring relationships and brands online should be observed from the introduction
to the growth stage of the customer life cycle. This is to say, cross-sectional research may
not be able to reveal the true phenomenon of customer behaviour towards a company.

The findings of this study have only supported customer satisfaction related to customer
retention in the scope of Internet banking. However, it was argued that the customer
satisfaction programs should be accompanied by switching costs management for early
detection and prevention of switching behaviour (Lee et al., 2001). Although research
into the adoption and uses of Internet banking has grown widely, the focus was on
determinants of the adoption rather than on users’ satisfaction with use (Pikkarainen,
Pikkarainen, Karjaluoto & Pahnila, 2006). Therefore, the implication for research on the
components of customer satisfaction may build a firmer foundation for customer
retention in the context of Internet banking.

Overall, results of this study overthrew the relevance of well established
commitment-trust theory in marketing that commitment has a substantial negative
effect on propensity to leave (Norton, Gudergan & Young, 2004). Since studies into the
segmentation in personal financial service have been inadequate (Harrison, 1994) and on
how to successfully retain customers in the context of Internet banking remains limited
(Gallaugher, 1999), the empirical findings of this study has provided new insight into
identifying the profitable customers of Internet banking in Hong Kong. This study has
indicated the critical factor of satisfaction on customer retention in conventional business mode still applies in Internet commerce.

The results have suggested that commitment has a weak effect and trust has a negative influence on customer retention in the scope of Internet banking in Hong Kong. These findings have contributed new knowledge to an understanding of factors affecting customer retention in a technology-based self-service business mode for finance in an Asian context. For theoretical support, research on customer retention in an Internet setting of financial products or services may draw on the limited online consumer marketing literature.

5.4 Implication for Practitioners

Practical implications refer to strategies pursued by financial institutions offering Internet banking service. It has been reported that only a few banks used customer-segment and profitability information to focus their marketing efforts (Donner and Dudley, 1996). Interestingly enough, a study on the perceptions of Internet banking services has found that profitable bank customers are easy to please as they prefer basic Internet banking services (Mäenpää, 2006).

The demographics of the respondents of this study revealed that the profile of a typical profitable online banking customer is highly educated, between 21 to 50 years old, and earns more than HK$10,000 a month. The implication for bank management is that they can identify the profitable customers in their database and actively develop appropriate strategies to retain them (Shapiro et al., 1987; Slywotzky and Shapiro, 1993; Jones and
Sasser, 1995) in the virtual market place to enjoy cost saving and increased efficiency in transaction and delivery (Peterson et al., 1997; Furash, 1999), and more important, profitability (Fornell and Wernerfelt, 1988; Anderson and Sullivan 1990).

The empirical results of this study have revealed that an Internet banking service that satisfies customers will retain them. The findings have suggested that if customers experience positive emotions, they will develop positive associations with the use of a website and will report a more positive effect toward a web vendor (Oliver, 1999). Customer satisfaction in traditional business modes holds true as an important predictor in electronic commerce (Oliver, 1997). Since satisfaction is such an important element in retaining customers as online bankers, bank management may consider the need to conduct regular satisfaction surveys with customers in the profitable segment to detect proactively if anything dissatisfies them and could trigger them into switching to a competitor.

The findings of this study, however, challenge the conventional wisdom in marketing literature that supports using such a strategy as a frequent-buyer programme to foster customer loyalty. When companies build Internet strategies around incentives and fail to address basic service issues, they may not win a sustainable market share (Basu, Basu & Batra, 1995). The research findings draw an implication to bank management that they may need to go back to the basic of improving the transactional-type of exchange to make customers satisfied with the service.

The results of this study have suggested that trust has a negative influence on customer retention in the scope of Internet banking. This is in line with an empirical study supporting the notion that trust and other security beliefs influence consumers’ intent to
purchase goods over the Internet and that perception of Internet security influence potential purchasing behaviour (Jones and Vijasarathy, 1998). Even though consumers may have experience with a vendor, the lingering concerns about the ‘atmosphere’ surrounding a transaction will moderate relations between emotions, beliefs, and attitudes (Long et al., 1999). However, trust research revealed that as experience with a situation or individual grows, the moderating influence of trust in the environment will diminish (McKnight, Cummings & Chervany, 1998). In addition, Internet shoppers’ lack of trust in the Internet does not influence their intent to revisit and purchase goods from a website (Thatcher and George, 2004).

An empirical study in India on online banking found that opportunistic behaviour has a significant negative effect on building trust (Mukherjee and Nath, 2003). Boston University Law Review wrote “trust is not appropriate for every situation and relationship. In negotiating with a used-car salesman or with a sworn enemy … we prefer strategies other than trust. In choosing a bank, trust also may not be crucial” (Nissenbaum, 2001). From the above, several implications have become clear for bank management. First, they may need to develop strategies to restore customers’ confidence in security when banking on the Internet. Second, their marketing programmes should foster positive experiences with customers over time to mitigate the concern of trust using the Internet for banking. Third, bank management may have to reconsider their initiatives to build trust for retaining customers online as these initiatives may not be the best marketing strategies for the context.

The findings of this study also have indicated that commitment also has a negative influence on customer retention in the context of Internet banking. This may agree with the arguments stating that repurchasing behaviour may be more a function of such
environmental constraints as happenstance or convenience rather than loyalty (Jacoby and Chesnut, 1978). Commitment is an essential element for distinguishing between lasting and transitory loyalty (Jacoby and Kyner, 1973), and it refers to attitudes not behaviour (Kelly, Donnelly & Skinner, 1990). In addition, it requires the customers’ resistance to change to defy offers from competitors (Jansson and Letmark, 2005). That means that customers remain loyal if there are few options for them to choose from. The implication for bank management is that there is always competition in the marketing arena. To retain customers, they may have to be alert of any environmental circumstances that may influence the attitude of committed customers and retain them.

Since convenience was cited as an environmental constraint, bank management may need to rethink the strategy of bank branches to cope with the changing business environment (Mendoncas and Nackache, 1996; Moutinho et al., 1997). For example, they can transform their branches with technology to serve their customers better (Wah, 1999). This could strengthen the bond with customers and make them more committed to continuing to use the Internet banking service.

5.5 Limitations

Certain limitations inherent in this study need to be acknowledged. First, the temporal customer e-behaviours including satisfaction, which has proved to be affecting customer retention, are relatively new in studies and often undergo changes over time. Indeed, few researchers have investigated potential changes in customer satisfaction and preferences over time (Mittal et al., 2002; Severin et al., 2002; Sultan and Henrichs, 2000). Internet banking is undoubtedly a changing phenomenon. Prior research indicated that customers’
attitudes and perceptions do change over time (KPMG, 1997). Therefore, the research should be conducted at different time intervals to understand the customers’ changing attitudes towards customer retention.

The survey of this research adopted a cross-sectional type of survey which the sample was examined once for analysis. The method can be biased if an incident affects the degree of satisfaction before or during this survey. The cross-sectional research is then unable to infer on cause and effect. However, it is useful in identifying patterns of relationships among relevant factors. Longitudinal research is essential to confirm the causal linkages among the study factors (Igbaria, Nancy, Paul & Angele, 1997). Longitudinal surveys run more than once with the same sample (Ghauri, Grønhaug & Kristianslund, 1995), and may reveal a clear picture before and after an environmental change, thus reflecting better on the overall relational commitment and trust quality.

This research is limited to the study of professionals and business practitioners in Hong Kong through ten organisations which agreed to participate in the survey. The results may not apply to professionals and business practitioners outside these organisations. If the research is collaborated with a bank using its Internet banking users, it will definitely offer more true results in explaining the relationship between different variables under study. In addition, “the possibility of validating any proposed scoring system is limited” (Cochrane Reviewers’ Handbook, 2004, p. 54). There is no proof that the relationship between such a score and the degree to which a study is bias-free. Therefore, it is assumed that the established scales for measuring the validity of trials of this survey instrument cannot be taken as perfect (Cochrane Reviewers’ Handbook, 2004).
The judgement-sampling method used in this study has its weaknesses. As one of the non-probability sampling designs, judgement-sampling chooses subjects who do not have a known chance of being selected, which could mean low representation of the population. The sampling method for this study may lead to insufficient generalizability of the research findings (Cavana et al., 2001).

A common problem in all field survey is non-response bias. Despite it being generally desirable that the respondents of the survey in this study be the representative of the sample in terms of demographic characteristics, a problematic area of response bias may occur if only those subjects of the sample responding were very satisfied or very dissatisfied. However, non-response bias was not a significant factor (Armstrong and Overton, 1977). Finally, interpretive error could have occurred through the responses gathered from the Internet owing to a misinterpretation of the questions in the questionnaire since the researcher could not meet and explain the questions to the respondents (Converse and Presser, 1986). Statistically, only 2.4 percent of the total respondents were from the Internet, which should not have a significant effect on the research findings.

5.6 Recommendations for Future Research

Despite these limitations, this research provides a theoretical framework for testing customer retention in Internet banking. There are opportunities to extend this work. Further research is recommended to be conducted in this area to validate the model across
other web-based industries, such as online auctions, in order to assess its general stability. Having a case-based research with Internet banking customers from the profitable segment of a bank can uncover in-depth perception on the effect of attitudinal attributes, such as commitment and trust, on customer retention.

Moreover, since this research was carried out in Hong Kong the data collected represents only Hong Kong. Duplicating this research in other Asian cities could test the truth of the findings when applied to other regions. Similarly, researching and conducting the same topic in a Western city, such as London, where the financial services and products are more advanced, could then be compared with the Hong Kong situation. This may contribute to an understanding of different cultural perpectives affecting behaviour towards customer retention in the context of Internet banking.

5.7 Conclusion

The sample of this survey, Hong Kong professionals and business practitioners, is a fair and adequate representation of the profitable bank-customer population of Hong Kong despite the fact that they earn more than the average customer.

Partial Least Square (PLS) analytical technique showed that the four constructs of this study of customer satisfaction, customer commitment, trust and customer retention reported adequate reliability and validity. However, the findings lend limited empirical support for the theoretical model.
The findings have revealed that customer satisfaction well supported customer retention whereas customer commitment and trust both have negative influences on customer retention in the context of Internet banking in Hong Kong among professionals and business practitioners.

The implications for research include the investigation of what antecedents lead to satisfying customers when banking online, the examination of what types of situational or social factors influence consumers’ commitment to perform Internet banking, and the measurement of relationships and brands online from the introduction to the growth stage of customer life cycle.

The implications for bank management include the identification of the profitable customers in their database for the development of the appropriate strategies with the objective of retaining them, the running of regular satisfaction surveys with profitable customers to detect switching intention, the development of strategies to restore customers’ confidence of security over banking on the Internet, the fostering of positive experience with customers over time to mitigate the concerns of trust using the Internet for banking; the reconsideration of the best marketing strategy for the relevant context, and the alertness of environmental happenings that may influence the attitude of the committed customers.

Limitations of the study are identified. Research timing, sampling technique and non-response bias can be improved for the generalizability of the research findings. Recommendations for future research are made. It is possible to validate the model across other web-based industries, replicate the research in different Asian regions to test how
true the findings are, conduct the same research in a western city to compare the effect of different cultural perspectives on switching behaviour, and carry out case-based research to uncover such in-depth perceptions of attitudinal attributes as commitment and trust on customer retention in the context of Internet banking.
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Appendix I  Survey Questionnaire of This Study

A Study of Internet Banking
Among Hong Kong Business Practitioners and Professionals

SURVEY INFORMATION SHEET

Dear Potential Participant,

I am Yau Suk Ching Eppie, a student in the faculty of Business and Law at the University of Newcastle, Australia undertaking Doctorate of Business Administration (DBA). As part of my studies, I am conducting a research project titled ‘A Study of Internet Banking Among Hong Kong Business Practitioners and Professionals’. You are invited to take part in this research project which examines the factors affecting Internet banking among business practitioners and professionals.

You are invited to participate in this research and this will involve:

- Completing an anonymous survey which will take approximately 15 minutes of your time.
- Return the survey to the distributor/sender. This will be taken as your informed consent to participate.

All information of this study will be treated strictly confidential. All respondents will remain anonymous to safeguard their privacy. By no means and at no time, will any participants be identified in any reports, other than this one, both during the course of and following this study. The data will not be used in other research in the future. Once the data has been analysed and the study completed, all printed completed questionnaires will be destroyed through shredding and the computer file deleted.

Participation is entirely voluntary. You can withdraw at any time and there will be no disadvantage if you decide not to complete the survey. All information collected will be confidential. All information gathered from the survey will be stored securely and once the information has been analysed all questionnaires will be destroyed. At no time will any individual be identified in any reports resulting from this study.

If you have any concerns or would like to know the outcome of this project, please contact my supervisor (Dr Siva Muthaly) at the above address.

Thank you for your interest,

Complaints Clause:
This project has been approved by the University’s Human Research Ethics Committee, Approval No. Bus-Law – [insert approval number when known].

The University requires that should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, telephone (02) 49216333, email HumanEthics@newcastle.edu.au)
Survey Questionnaire
A STUDY OF INTERNET BANKING AMONG HONG KONG BUSINESS PRACTITIONERS AND PROFESSIONALS

Part I: Perception of your Internet banking service

Please rate the extent of your perception concerning the **Internet banking service of your bank** by ticking in the box ☑ to indicate your answers to Questions 1-10.

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Slightly agree</th>
<th>Neutral</th>
<th>Slightly disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1  I am very satisfied with my choice of the Internet banking service of my bank.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q2  I feel good about my decision to choose this bank with regards to its Internet banking service.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q3  It is a wise decision to carry out Internet banking at my bank.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q4  Internet banking at my bank has really pleased me.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q5  If I had to do it all over again, I would choose the same Internet banking service of my bank.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q6  I would probably be happy with the Internet banking services of another bank.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q7  I would be willing to pay a higher price for using the Internet banking service of my bank over other banks.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q8  In the future I will continue to carry out Internet banking at my bank.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q9  In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Q10 I feel a sense of loyalty to my bank with regards to its Internet banking service.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Please rate the extent of your perception concerning your bank with regards to its Internet banking service by ticking in the box ☒ to indicate your answers to Questions 11-20.

| Q11 | I have confidence that my bank provides the best Internet banking service. |
| Q12 | I find it necessary to be cautious in dealing with my bank. |
| Q13 | My bank holds me in high regard as a customer. |
| Q14 | My bank can be relied upon to keep their promises and service pledge. |
| Q15 | I trust this bank. |
| Q16 | My bank is interested in my satisfaction. |
| Q17 | I am always on the lookout for an alternative bank. |
| Q18 | I feel like there is a 'bond' between my bank and myself. |
| Q19 | I am very committed to my relationship with my bank. |
| Q20 | I should put maximum effort to maintain the relationship with my present bank. |

**Part II: Personal Data**

Please tick in the box ☒ or fill in the blank to indicate your answer for Questions 21-27.

Q21 What is your gender?
1 ☐ Male
2 ☐ Female
Q22 What is your marital status:
1 ☐ single
2 ☐ married
3 ☐ divorced
4 ☐ separated
5 ☐ widowed
6 ☐ none of the above (please specify: ________________________ )

Q23 Which age group do you fall into?
1 ☐ 20 or under
2 ☐ 21-30
3 ☐ 31-40
4 ☐ 41-50
5 ☐ 51-60
6 ☐ 61-65
7 ☐ over 65

Q24 What is your highest education level?
1 ☐ Primary or below
2 ☐ Secondary
3 ☐ Post-secondary
4 ☐ University
5 ☐ Postgraduate or above

Q25 Which monthly income range do you fall into?
1 ☐ HK$10,000 or below
2 ☐ HK$10,001 – HK$20,000
3 ☐ HK$20,001 – HK$30,000
4 ☐ HK$30,001 – HK$40,000
5 ☐ HK$40,001 – HK$50,000
6 ☐ HK$50,001 or above

Q26 How long have you been working? ____________ years

Q27 What is your occupation? ________________________________

End of Questionnaire

Thank you very much for your time!
## Appendix II Established Source for the Questionnaire

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Questions</th>
<th>Established Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Satisfaction</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Q1 | *I am very satisfied with my current choice of financial advisor.*  
*I am very satisfied with my choice of the internet banking service of my bank.* | Sharma and Patterson, 2000 |
| Q2 | *I feel good about my decision to choose this advisor.*  
*I feel good about my decision to choose this bank with regards to its Internet banking service.* | Sharma and Patterson, 2000 |
| Q3 | *It was a wise decision to carry out electronic banking at Easybank.*  
*It was a wise decision to carry out Internet banking at my bank.* | Oliver and Svan, 1989 |
| Q4 | *Electronic banking at Easybank has really pleased me.*  
*Internet banking at my bank has really pleased me.* | Oliver and Svan, 1989 |
| **Retention** | | |
| Q5 | *If I had to do it all over again, I would choose the same adviser.*  
*If I had to do it all over again, I would choose the same Internet banking service of my bank.* | Sharma and Patterson, 2000 |
| **Satisfaction** | | |
| Q6 | *I would probably be happy with the products and services of another bank.*  
*(Reverse Coded)*  
*I would probably be happy with the Internet banking services of another bank.*  
*(Reverse Coded)* | Jones, Mothersbaugh and Beatty, 2000 |
| **Commitment** | | |
| Q7 | *I would be willing to pay a higher price for this brand over other brands.*  
*I would be willing to pay a higher price for using the Internet banking service of my bank over other banks.* | Chaudhuri and Holbrook, 2001 |
| **Retention** | | |
| Q8 | *In the future I will continue to carry out electronic banking at Easybank.*  
*In the future I will continue to carry out Internet banking at my bank.* | Homburg and Giering, 2001 |
| Q9 | *In the future I will continue to recommend Easybank to my friends and acquaintances.*  
*In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.* | Homburg and Giering, 2001 |
| Commitment | Q10 | • I feel a sense of loyalty to my main bank.  
• I feel a sense of loyalty to my bank with regards to its Internet banking service. | Colgate and Lang, 2001 |
| Trust | Q11 | • I have confidence that my bank provides the best deal.  
• I have confidence that my bank provides the best Internet banking service. | Colgate and Lang, 2001 |
| Trust | Q12 | • I find it necessary to be cautious in dealing with my adviser. (Revise Coded)  
• I find it necessary to be cautious in dealing with my bank. (Reverse Coded) | Sharma and Patterson, 2000 |
| Trust | Q13 | • Easybank holds me in high regard as a customer of its product.  
• My bank holds me in high regard as a customer. | Delgado-Ballester and Munuera-Alemán, 2001 |
| Trust | Q14 | • My adviser can be relied upon to keep his promises.  
• My bank can be relied upon to keep their promises and service pledge. | Sharma and Patterson, 2000 |
| Trust | Q15 | • I trust this brand.  
• I trust this bank. | Chaudhuri and Holbrook, 2001 |
| Trust | Q16 | • Easybank is interested in my satisfaction.  
• My bank is interested in my satisfaction. | Delgado-Ballester and Munuera-Alemán, 2001 |
| Commitment | Q17 | • I am always on the lookout for an alternative adviser. (Reverse Coded)  
• I am always on the lookout for an alternative bank. (Reverse Coded) | Sharma and Patterson, 2000 |
| Commitment | Q18 | • I feel like there is a ‘bond’ between at least one employee at this bank and myself.  
• I feel like there is a ‘bond’ between my bank and myself. | Jones, Mothersbaugh and Beatty, 2000 |
| Commitment | Q19 | • I am very committed to my relationship with my advisor.  
• I am very committed to my relationship with my bank. | Sharma and Patterson, 2000 |
| Commitment | Q20 | • I should put maximum effort to maintain the relationship with my present advisor.  
• I should put maximum effort to maintain the relationship with my present bank. | Sharma and Patterson, 2000 |

Remarks:  
Fonts in italics = established source  
Fonts in regular = modified version  
Fonts underlined = wording being modified