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## Customer switching behavior in the New Zealand banking industry

### Abstract

Global deregulation of the banking industry that began in the early 1980s has contributed to increased customer switching. This situation is also evident in the New Zealand banking industry. However, limited research has been published in academic marketing journals focusing on switching behavior in the banking industry. This study identifies and examines the factors that contribute to bank switching in New Zealand from the customer's perspective.

Data for this study were obtained through a mail survey sent to 1,960 households in Christchurch, New Zealand. Logistic regression is used to analyze the data and determine the impact the factors have on customer switching behavior in New Zealand. The logistic regression results confirm that customer commitment, service quality, reputation, customer satisfaction, young-age, and low educational level are the most likely factors that contribute to customers' switching banks.

**Keywords:** customer Switching behavior, New Zealand banking industry, Logit Choice Model.

**JEL Classification:** G20, M30.

### Introduction

Traditionally, banks have dominated the financial service sector for many years due to government regulation, the high cost of entry, and the physical distribution networks (Reber, 1999). During the 1980's, the international banking sector coped with the international level of deregulation. More recently, banks have been confronted with increased competition from both financial institutions and non-banks institutions (Hull, 2002). New competitors, such as non-bank institutions, have entered the market as cross-border restrictions have been lifted. New technologies, such as the Internet, have also boosted the entrance of new competitors during the last few years and banks now must compete with new types of products created through the Internet (Gonzalez and Guerrero, 2004). The deregulation and the emergence of new forms of technology have acted to create highly competitive market conditions and consumers are now more price and service conscious in their financial services buying behavior (Beckett, Hewer and Howcroft, 2000).

Many of the changes in the international banking environment are also evident in the New Zealand banking industry. The banking industry in New Zealand was one of the first industries to feel the effects of competition and an open-market philosophy when New Zealand deregulated its economy in 1987. Colgate (2000) suggests that the New Zealand banking industry has been subject to a free market entry with no price controls, and few restrictions on product offerings since 1987. The banking industry has experienced considerable change in response to deregulation, technology, and a more sophisticated and demanding customer (Ashill, Davies, and Thompson, 2003). In addition, traditional lines of demarcation have largely disappeared and several institutions compete more aggressively over a wider product range.

Therefore, New Zealand banks are not only competing among each other, but also against non-banks and other financial institutions (Hull, 2002).

To date, only one major New Zealand bank (Kiwi-bank) is locally owned, while the other four (ANZ Banking Group Ltd./National Bank of NZ Ltd., Westpac Banking Corporation, ASB Bank, and Bank of New Zealand) are Australian owned. Furthermore, increased competition, funding restraints, and the adoption of new technologies have reduced the number of bank branches and increased the use of automatic teller machines and other electronic transaction mechanisms (Denys, 2002).

Many New Zealand banks have employed customer retention strategies to compete aggressively in a more competitive banking environment. Customer retention is logical as the longer a customer stays with an organization, the more profits the customer generates (Reichheld and Sasser, 1990). Long-term customers tend to increase the value of their purchases, the number of their purchases, and produce positive word of mouth (Carole and Ye, 2003). In addition, from a cost perspective, retaining an existing bank customer costs less than recruiting a new one.

New Zealand bank customer behavior has also changed over several decades due to deregulation, more intense competition, and new technology (Ashill et al., 2003). Colgate (1999) found that the New Zealand banking industry had an annual switching rate of four percent, however at any one time, 15 percent of personal retail banking customers claimed they intended to switch banks. Similarly, Garland (2002) employed a Juster scale to estimate a total defection rate of ten percent from a customer's main bank in one geographic region in New Zealand. Research related to the insurance and banking industries in New Zealand determined that the percentage of customers who seriously considered switching service providers but remain with their current provider was 22 percent in the banking

industry (Colgate and Lang, 2001). Therefore, it is important that banks not only know the number of customers they are retaining and losing, but also understand the underlying factors influencing their customers to switch banks.

The purpose of this research is to identify and examine the factors that contribute to bank switching in New Zealand from the customer's perspective. The factors have been based on a thorough review of the literature and additional information obtained from focus group interviews. The factors that are identified and supported in the literature include price, reputation, responses to service failure, customer satisfaction, service quality, service products, customer commitment, demographic characteristics, effective advertising competition, and involuntary switching. This research focuses on these factors that are supported in the literature and includes additional factors that have been identified in focus group sessions. The additional factors are: effective advertising competition, customer commitment, and demographic characteristics.

### 1. Previous research on switching behavior

Bass (1974) initially applied brand-switching models to analyze market share in the goods market. However, for services, consumer switching behavior may be different because services are distinguished from goods based on five special characteristics: intangibility, inseparability, heterogeneity, perishability, and ownership (Clemes, Mollenkopf, and Burn, 2000). These special characteristics usually result in the absence of a tangible output in services and they distinguish services from goods (Gronroos, 1990).

Service switching is a growing research area in marketing. Several studies have revealed that the following factors contribute to customer switching: dissatisfaction in the insurance industry (Crosby and Stephen, 1987), service encounter failure in the retail industry (Kelley, Hoffman, and Davis, 1995), and perceptions of quality in the banking industry (Rust and Zahorik, 1993). Furthermore, previous studies have highlighted that service quality and satisfaction are related to service switching (Bitner, 1990; Zeithaml, Berry, and Parasuraman, 1996). Although it is acknowledged that service quality and customer satisfaction are important drivers of service switching, researchers have emphasized the need to shift away from a sole focus on these broad evaluative concepts of service. Instead, emphasis is being placed on classifying the specific problems, events and non-service factors that may cause service switching (Levesque and McDougall, 1996; Zeithaml, Berry, and Parasuraman, 1996).

Keaveney (1995) uses a generalized model to examine consumer switching behaviour across a broad

spectrum of service providers including banks. The model includes eight factors influencing service switching: pricing, inconvenience, core service failure, service encounter failure, response to service failure, ethics, competition, and involuntary switching. However, Mittal, Ross, and Baldasare (1998) indicated that the unique characteristics of switching behavior in specific service contexts such as banking may be masked when generalized models are directly applied. For example, even though a problem may occur frequently and cause switching in some service industries, it does not necessarily mean that the problem will be an important influence on a customer's eventual decision to switch banks. In addition, Keaveney's (1995) switching model does not accurately assess the relative weight of these issues on a customer's decision to switch service providers (Colgate and Hedge, 2001). Therefore, additional research is necessary to ascertain the applicability of Keaveney's (1995) generalized switching model to the banking industry.

Stewart (1998) and Gerrard and Cunningham (2000) have studied customer switching behavior in the banking industry. Stewart (1998) suggested four types of switching incidents that relate to how customers were treated: facilities, provision of information and confidentiality, and services issues. Gerrard and Cunningham (2000) also identified six incidents that they considered to be important in gaining an understanding of switching between banks. These incidents were: inconvenience, service failures, pricing, unacceptable behavior, attitude or knowledge of staff, involuntary/seldom mentioned incidents, and attraction by competitors. In addition, other researchers, such as Lewis and Bingham (1991) and Colgate, Stewart, and Kinsalla (1996) have summarized reasons why customers switch banks. However, the authors investigated a range of matters associated with the banker-customer relationship, thus these studies' contribution to the development of switching behavior was limited. Colgate and Hedge (2001) identified three general problems, pricing issues (fee, charges, interest rate), service failures (mistake, inflexible, inaccessible, unprofessional), and denied services (denied loan, no advice) that contributed to customers' switching banks in New Zealand.

Although many international studies emphasize why customers switch service organizations (Keaveney, 1995; Levesque and McDougall, 1999; Zeithaml, Berry, and Parasuraman, 1996) and switching behavior importance (Mittal and Lassar, 1998; Reichheld, and Sasser, 1990), there has been little empirical research focused on the factors that have impact on bank switching behavior in the New Zealand banking industry.

## 2. Factors influencing customer switching behavior

All of the factors in this study, except demographic, that contribute to customer switching behavior show negative relationships (see Figure 1). For example,

switching banks is considered as a negative customer behavioral outcome. Demographic characteristics have a positive or negative relationship with switching behavior as they are indeterminate factors.

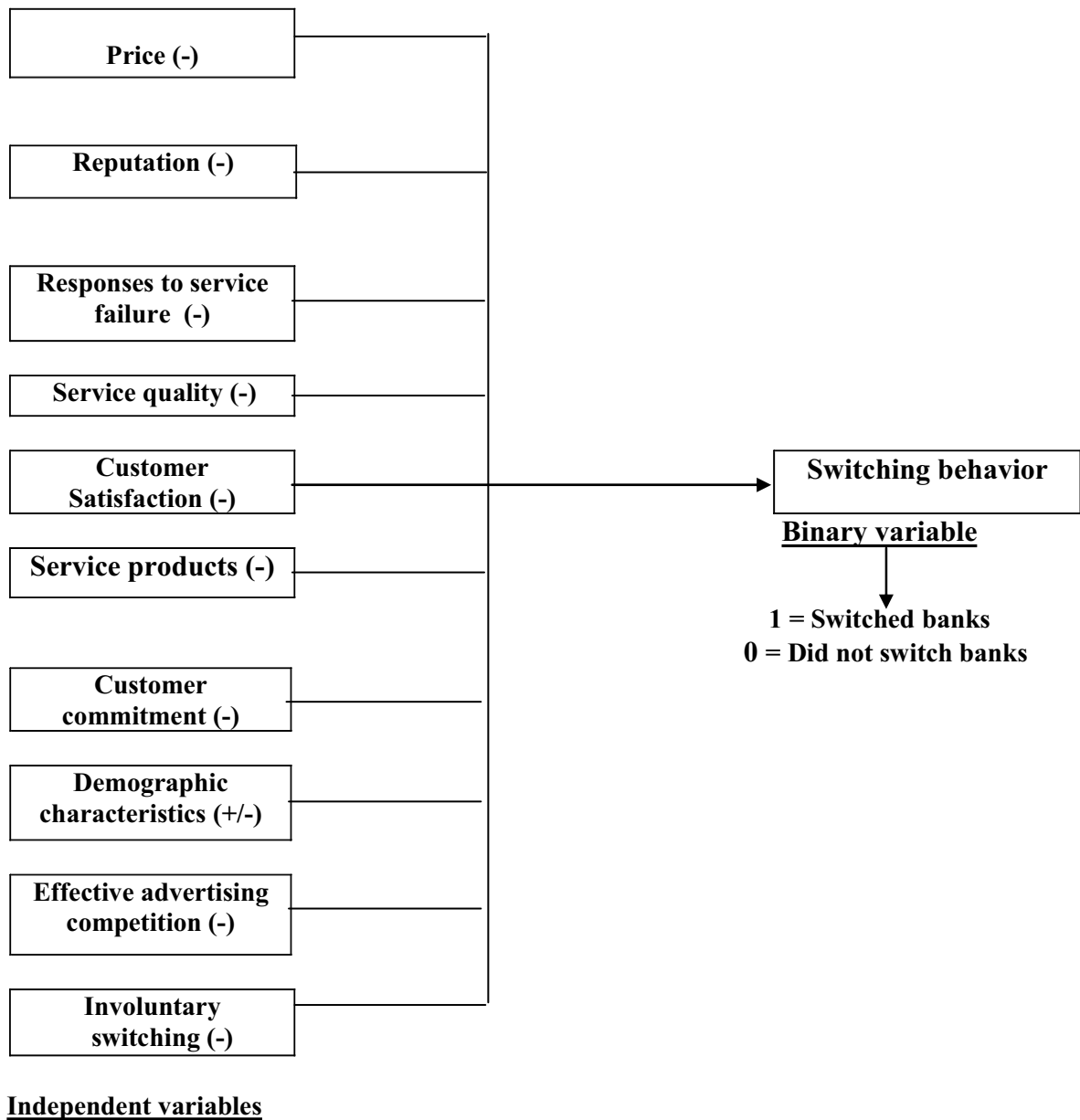


Fig. 1. Theoretical research model

**2.1. Price factors.** From a customer’s cognitive conception, price is something that must be given up or sacrificed to obtain certain kinds of products or services (Zeithaml, 1998). Pricing, in the context of banking, has additional components. Banks charge not only fees for the services, but also impose interest charges on loans and pay interest on certain types of accounts, thus pricing has a broader meaning in the banking industry (Gerrard and Cunningham, 2004).

Dawes (2004) empirically demonstrated that price increases were associated with increasing defection rates in automobile insurance. Similarly, in a qualitative study of customer switching among services, Keaveney (1995) reported that more than half the customers had switched services due to poor service/price perceptions. This finding suggests that unfavorable price perceptions may have a direct effect on a customer’s intention to switch. Colgate and Hedge (2001) empirically confirmed that price

ing had the most impact on customer switching in the New Zealand and Australian banking industries.

**2.2. Reputation factors.** The first historical phase in the study of corporate reputation was from the 1950's to the 1970's (Balmer, 1998) and there is growing evidence that many banks are concerned with their reputation and its effect on market behavior. In the banking industry, Rao (1994) suggested that bank reputation was a function of financial performance, production quality, service quality, management effectiveness or some combination of these various factors that appeal in one way or another to a bank's multiple customers. Gerrard and Cunningham (2004) also referred to bank reputation as the integrity of a bank and its senior executives and the bank's perceived financial stability.

Bank reputation plays an important role in the determining the purchasing and repurchasing behaviors of customers (Wang, Lo, and Hui, 2003). Customer loyalty is similarly enhanced, especially in the retail banking industry, where quality cannot be evaluated accurately before purchase (Nguyen and Leblanc, 2001). Researches suggest that bank reputation is regarded as an important factor in customers' bank selection decisions (Erol, Kaynak, and Radi, 1990; Yue and Tom, 1995). In addition, Gerrard and Cunningham (2004) investigated switching incidents for Asian banks and empirically demonstrated that bank reputation was one of the primary factors that contributed to customers switching banks. The authors argued that a good reputation may enhance customers' trust and confidence in banks, whereas an unfavorable reputation tended to strengthen a customer's decision to switch banks.

**2.3. Responses to service failure factors.** Hirschman (1970) demonstrated that service failures could provoke two active negative responses: voice and exit. Day and Landon (1977) described the notion of voice by explaining that voice can be complaining to the service provider, complaining to acquaintances (negative word of mouth), or complaining formally to third parties in order to help seek redress. For exit, Singh (1990) referred to the voluntary termination of an exchange relationship.

Financial services are often provided at a service counter with direct contact between a bank's employees and the customer, or by telephone, or by having the customers interact with the bank's automatic teller machines (ATM). Simultaneity in delivering and receiving a service is a common characteristic in the banking sector. Although banks try to provide error free services, service failures are inevitable because the bank-customer interaction is influenced by many uncontrollable factors (Stefan, 2004).

Service failures may lead to customer dissatisfaction. Stewart (1998) argued that dissatisfaction in relation to a particular problem or incident may not be sufficient to cause a customer to exit. The exit is likely to be promoted when the customer remembers prior instances or when the same problems have emerged. However, the author also stated that tolerating a problem on one occasion does not mean that the problem "dies" as a lack of response to service failures may also exaggerate the circumstance and increase the likelihood of a customer switching banks.

Keaveney (1995) empirically confirmed that responses to service failure were a factor contributing to customer switching behavior. Customer switching, in the banking industry, is often the result of a customer complaining and then experiencing the bank service provider's recovery efforts (Colgate and Norris, 2001). Customers may become more dissatisfied, and even leave, if recovery efforts are poor. Customers may also be satisfied with the recovery they have received but still exit. These situations may result from a perceived lack of exit barriers by the customer, or the recovery may not fully compensate unfavorable incidents that bank customers have experienced, or the service failures may be so bad that even a good service recovery will not change the customer's decision to switch banks (Colgate and Norris, 2001).

**2.4. Customer satisfaction factors.** Many researchers have provided different definitions of customer satisfaction. Hunt (1977) stated that "satisfaction is not the pleasure of the experience, it is an evaluation rendered that the experience was at least as good as it was supposed to be" (p. 459). Churchill and Surprenant (1982) conceptually considered satisfaction as "an outcome of purchase and use resulting from the buyer's comparison of the rewards and costs of the purchase in relation to the anticipated consequences" (p. 493). Based on previous definitions, Oliver (1997) offered a formal definition that "satisfaction was the customer's fulfilment response and it was a judgment that a product or service feature, or the product or service itself, provided a pleasurable level of consumption-related fulfilment" (p. 13).

Customer satisfaction is often recognized as a main influence in the formation of customers' future purchase intention (Taylor and Baker, 1994). Customers who gain satisfaction from services are inclined to repeat purchase. Thus, customer satisfaction serves as an exit barrier to help an organization retain its customers and lower its switching rate (Fornell, 1992).

In contrast, Ahamad and Kamal (2002) found that dissatisfied customers contributed to an increase in the switching rate. Athanassopoulos, Gounairs, and

Stathakopoulos (2001) investigated the relationship between customer satisfaction and switching behavior in the Greece banking industry. The authors empirically confirmed that the perceptions of high customer satisfaction are negatively related to switching behavior, alternatively, when bank customers have inferior perceptions of customer satisfaction, they engage in unfavorable behavior responses (e.g. switching banks).

**2.5. Service quality factors.** Service quality has become an increasing important factor for success and survival in the banking industry. Many banks have employed the quality of service as a sustainable competitive advantage because products offered by most banks are almost identical and are duplicated easily.

Gronroos (1984a, 1984b) suggested that the perceived quality of a given service was the outcome of an evaluation process where consumers compared their expectations of the service with the service that they experienced in the service encounter. Good perceived quality was achieved when expected service quality was at least equal to experienced service quality. Parasuraman, Zeithaml, and Berry (1988) employed the expectation-perceptions gaps definition of service quality to define perceived service quality as the degree of discrepancy between customers' normative expectations for the service and their perceptions of service performance. In the context of banking, Kamalia and Jacques (2000) suggested that perceived service quality resulted from the difference between customers' perceptions for the service offered by the bank (received service) and their expectations from the bank that provided such services (expected service).

SERVQUAL as a measurement instrument, and the five SERVQUAL dimensions identified by Parasuraman, Zeithaml, and Berry (1985, 1988, 1991), have been used in the banking industry (Zhu, Wymer, and Chen, 2002). The SERVQUAL methodology has also been used in assessing banking service quality. For example, Levesque and McDougall (1996) adapted a selection of service quality items from Parasuraman, Zeithaml, and Berry's (1988) SERVQUAL measurement in order to gain insights into service quality from the customers' perspectives and to improve the understanding of the determinants of customer satisfaction.

Avkiran (1994), in a study of an Australian trading bank, identified four valuable service quality dimensions: staff conduct, credibility, communication, and access to teller services. Ennew and Bink (1996) used factor analysis to identify three banking service quality dimensions in the United Kingdom: knowledge and advice offered, personalization in the ser-

vice delivery, and general product characteristics. Bahia and Nantel (2000) identified six perceived service quality dimensions in the banking industry: effectiveness and assurance, access, price, tangibles, service portfolio, and reliability.

The service quality dimensions used in this research to analyze the relationship between service quality and bank switching behavior are based on an extensive literature review and the results of focus group sessions. They represent a customer's overall impression of his/her banking service experience. The three dimensions are: inconvenience, reliability, and staff that deliver services.

The inconvenience dimension includes two aspects: geographical inconvenience and time inconvenience (Gerrard and Cunningham, 2004). The former refers to either the nearest bank branch or automatic teller machine (ATM), while the latter refers to shorter opening hours. Keaveney (1985), Colgate and Hedge (2001) and Gerrard and Cunningham (2004) have empirically confirmed that inconvenience was an important factor that influenced customers to switch banks. The authors argued that the inconvenience dimension was negatively associated with customers switching banks.

Reliability, as a service quality dimension, may be represented in a number of ways (Parasuraman, Zeithaml and Berry, 1985; Bahia and Nantel, 2000). Reliability has a time component. If a bank promises to do something by a certain time, the bank should do so. For example, a bank customer may have applied for a loan and the bank's guidelines mandate that the customer will be advised of the outcome within forty-eight hours of the loan application. In this scenario, the bank should provide the customer with its decision within the specific time frame. Colgate and Hedge (2001) found that, in the context of banks, performing poorly on the reliability dimension prompted customers to switch banks.

Philip and Bart (2001) found that bank customers had high expectations about the staff that deliver the service; in particular, that customers were concerned about staff appearance, courtesy, efficiency, and knowledge. Colgate and Hedge (2001) and Gerrard and Cunningham (2004) empirically demonstrated that an unfavorable experience with the staff that deliver the service was a principal factor that caused customers to switch banks.

**2.6. Service products factors.** Rust and Oliver (1994) suggested that service products include a core service, plus additional specific features, service specifications, and targets. Several studies revealed that the wide range of bank service products offered to customers was one of the most important

criteria for customers when they select a bank (Levesque and McDougall, 1996; Kamal, Ahmad, and Khalid, 1999). In addition, Ogilvie (1997) empirically determined that a lack of service products for bank customers was a major factor that caused bank switching. Ogilvie's (1997) finding was also supported by Kiser (2002), who suggested that banking products appeared to be central to customer behavioral intentions, including switching behavior.

**2.7. Customer commitment factors.** Dube and Shoemaker (2000) suggested that there is also a need to understand switching behavior from a relationship marketing perspective. In a relationship marketing context, customer commitment was seen as an attitude that reflects the desire to maintain a valued relationship. In a three-component model, Allen and Meyer (1990) defined three commitment constructs: affective commitment, continuance commitment, and normative commitment.

Bansal, Irving, and Taylor (2004) extended Allen and Meyer's (1990) model to a customer setting where commitment is conceptualized as a force that binds an individual to continue to purchase services (i.e., not switch) from a service provider. From a customer-basis, the authors also suggested that affective commitment bound the customer to the service provider out of desire, normative commitment bound the customer to the service provider out of perceived obligation, and continuance commitment bound the customer to the service provider out of need.

From the organizational behavior literature, research supports that affective, continuance, and normative commitment may mediate the relationship between satisfaction and intention to leave (Clugston, 2000). There is evidence from the marketing literature that supports the contention that commitment mediates relational exchanges (Garbarino and Johnson, 1999). In particular, Gordon (2003) empirically confirmed that committed customers were less likely to switch than consumers who lacked commitment to an organization, such as banks.

This exploratory study treats commitment as a single construct as measuring it at the particular psychological state that underlies the construct would add substantially to length of the questionnaire. The contention is that committed customers, regardless of their level of commitment, are less likely to switch banks than those customers who lack any commitment.

**2.8. Demographic characteristics factors.** Customers' demographic characteristics have been widely used to distinguish how one segment of customers differs from another one (Kotler, 1982). In terms of assessing customer switching in the context

of banking, demographic characteristics, such as age, income and education may have an effect on customers switching banks. Colgate and Hedge (2001) empirically examined Australian and New Zealanders' banking behavior and found that switching banks was more common with younger customers, high-income customers and customers with a higher education. There is also evidence in previous research that supports the contention that additional demographic characteristic such as gender, race, and occupation have an impact on customer switching behavior in the banking industry.

**2.9. Effective advertising competition factors.** In a service context, advertising is most commonly used to create awareness and stimulate interest in the service offering, to educate customers about service features and applications, to establish or redefine a competitive position, to reduce risk, and to help make services more tangible (Lovelock, Patterson, and Walker, 1998). Hite and Fraser (1988) suggested two significant consequences for customers' attitude changes toward advertising professional services. The attitudes of customers toward advertising professional services had become more positive with greater expected customer benefits and customers still favored increased usage of advertising to guide their purchasing.

In a banking context, Blanchard and Galloway (1994) argued that advertising created a sterile image. Similarly, Balmer and Stotving (1997) suggested that advertising, as a means of marketing communication, was blamed for reinforcing the similarity of financial service providers, rather than differences. Devlin (1997) has suggested that effective advertising should add value in the eye of the customer. Therefore, the author proposed that effective advertising competition could provide bank customers with more opportunities for their purchasing choices, which in turn, could contribute to customer switching.

**2.10. Involuntary switching factors.** East, Lomax, and Narain (2001) defined involuntary switching as an unwilling behavior by customers. The authors also suggested that involuntary switching could be attributed to a customer moving house and to a service provider opening and closing facilities. The authors also empirically demonstrated that involuntary switching could force customers to switch service providers in the service sector (Keaveney, 1995; East, Lomax, and Narain, 2001).

Involuntary switching is, for the most part, beyond the control of marketers but is included in many switching behavior models (Keaveney, 1995). Involuntary switching is measured in this study as the in-

clusion of the construct aids in identifying all of the factors that contribute to bank switching behaviour.

### 3. Methodology and Data

**3.1. Qualitative choice model of customer switching behavior.** Qualitative choice models designate a class of models, such as logit and probit, which attempt to relate the probability of making a particular choice to various explanatory factors and calculate the probability that the decision-maker will choose a particular choice or decision from a set of choices or decisions ( $J_n$ ), given data observed by the researcher. This choice probability ( $P_{in}$ ) depends on the observed characteristics of alternative  $i$  ( $z_{in}$ ) compared with all other alternatives ( $z_{jn}$ , for all  $j$  in  $J_n$  and  $j \neq i$ ) and on the observed characteristics of the decision-maker ( $s_n$ ). The choice probability can be specified as a parametric function of the general form:

$$P_{in} = f(z_{in}, z_{jn}, s_n, \beta), \tag{1}$$

where  $f$  is the function relating the observed data to the choice probabilities specified up to some vector of parameters,  $\beta$ . By relating qualitative choice models to utility theory, a clear meaning of the choice probabilities emerges from the derivation of probabilities from utility theory. The utility from each alternative depends on various factors, including the characteristics of the alternative and the characteristics of the decision-maker. By labeling the vector of all relevant characteristics of person  $n$  as  $r_n$  and the vector of all characteristics of alternative  $i$  chosen by person  $n$  as  $x_{in}$ , the utility can be expressed as a function of these factors,

$$U_{in} = U(x_{in}, r_n) \tag{2}$$

for all  $i$  in  $J_n$ , the set of alternatives.

Based on Marshall's consumer demand theory of utility maximization, the decision-maker therefore choose the alternative from which they derive the greatest utility. Their choice can be said to be deterministic and they will choose  $i$  ( $i \in J_n$ ) if  $U(x_{in}, r_n) \geq U(x_{jn}, r_n)$ , for ( $i, j \in J_n$  and  $j \neq i$ ). To specify the choice probability in qualitative choice models,  $U(x_{in}, r_n)$  for each  $i$  in  $J_n$  is decomposed into two sub functions, a systematic component that depends only on the factors that the researcher observes and another that represents all factors and aspects of utility that are unknown or excluded by the researcher, labelled  $\varepsilon_{in}$ .

$$\text{Thus, } U_{in} = U(x_{in}, r_n) = V(Z_{in}, s_n) + \varepsilon_{in}, \tag{3}$$

where  $Z_{in}$  are the observed attributes of alternative  $i$ , and  $s_n$  are the observable characteristics of decision-maker  $n$ .

$$P_{in} = P(U_{in} \geq U_{jn}) \quad \forall \quad i, j \in J_n \text{ and } i \neq j, \tag{4}$$

hence,

$$P_{in} = P(V_{in} - V_{jn} \geq \varepsilon_{jn} - \varepsilon_{in}) \quad \forall \quad i, j \in J_n \text{ and } i \neq j. \tag{5}$$

Qualitative choice models are used to predict probabilities of choices being made and they attempt to relate the probability of making a particular choice to various explanatory factors. Probabilities must be between zero and one. Estimation of parameters to maximize the probability of the choice  $Y_i = 1$  by use of a linear probability model and ordinary least squares (OLS) is not acceptable due to the return of probabilities outside the unit interval. In addition, the use of a linear probability model results in heteroscedastic errors and as a consequence, t-tests of significance are not valid. For these reasons it is preferable to use either a logit or probit model.

Different qualitative choice models are obtained by specifying different distributions for the unknown component of utility,  $\varepsilon_{in}$ , and deriving functions for the choice probabilities (Ben-Akiva and Lerman, 1985; Train, 1986). If the random term is assumed to have a logistic distribution, then the above represents the standard binary logit model. However, if it is assumed that the random term is normally distributed, then the model becomes the binary probit model (Maddala, 1993; Ben-Akiva and Lerman, 1985; Greene, 1990). A logit model was used in this research because of the binary nature of the approach, and the differences between the two models are slight (Maddala, 1993). The model is estimated by the maximum likelihood method used in LIMDEP version 7.0.

Thus, the choice probabilities can then be expressed as

$$P_{in} = e^{\mu V_{in}} / \sum_{j \in J_n} e^{\mu V_{jn}} \quad \forall \quad i, j \in J_n, \mu = \text{positive scale parameter, i.e., } \mu > 0$$

$$\text{or, } P_{in} = 1 / (1 + e^{-\mu[V_{in} - V_{jn}]}). \tag{6}$$

Under relatively general conditions, the maximum likelihood estimator is consistent, asymptotically efficient and asymptotically normal. For example, consumers who are considering switching banks are faced with a simple binary choice situation: to switch to a new bank, or to stay with the current bank. The consumer's utility associated with switching bank is denoted as  $U_{1n}$ , and the utility associated with staying with the current bank is denoted as  $U_{0n}$ , which is represented as:

$$U_{in} = V_{in} + \varepsilon_{in} \quad \forall \quad i \in J_n \text{ and } J_n = \{0,1\}. \tag{7}$$

The consumer will choose to switch to a new bank if  $U_{1n} > U_{0n}$  and the utility of each choice depend on the vector of observable attributes of the choices and the vector of observable consumer characteristics, summarized as  $V_{in}$ . All unobservable and excluded

attributes and consumer characteristics are represented by the error term,  $\varepsilon_{in}$ , that is assumed to be independently and identically Gumbel-distributed. The choice probability of  $U_{1n} > U_{0n}$  is given as  $P_{1n} = Pr_n(U_{1n} > U_{0n}) = 1 / (1 + e^{-\mu(V_{1n} - V_{0n})})$ , where  $\mu > 0$ . In switching banking decision, the vector of observable attributes of the choices and the vector of observable consumer characteristics are represented in the following parametric functional form:

$$SBANK = f(PR, RP, RSF, SQ, SP, CC, EAC, DC, IS, GEN, AGE, ETH, EDU, OCC, INC, \varepsilon), (8)$$

where the discrete dependent variable, *SBANK*, measures an individual who has switched banks. The dependent variable is based on the question asked in the mail survey: "Have you switched banks in the last five years?"

*SBANK* = 1 if the respondent has switched banks; 0 otherwise; *PR* (-) = Price; *RP* (-) = Reputation; *RSP* (-) = Responses to Service Failure; *CS* (-) = Customer Satisfaction; *SQ* (-) = Service Quality; *SP* (-) = Service Products; *CC* (-) = Customer Commitment; *EAC* (-) = Effective Advertising Competition; *DC* (+/-) = Demographic Characteristics; *IS* (-) = Involuntary Switching;  $\varepsilon$  = Error term.

For the value of dummy variables, see Appendix 1.

**3.2. Questionnaire development.** The questionnaire design involved operationalizing the factors contributing to switching banks, conducting the focus group interviews, designing the layout of the survey instrument, a pretest, and the development of the final survey instrument.

In order to develop a suitable questionnaire, two focus groups (each consisting of 10 bank customers who had recently switched banks) were conducted under the guidelines suggested by Hair, Bush, and Ortinau (2000). Participants in the focus groups were asked to discuss all of the factors identified in

the literature that contributed to switching banks. The participants were also asked to discuss those factors that they considered to be the most influential in their decision to switch banks. In addition, they were encouraged to identify and explain any additional factors that were not previously identified in the literature but may have contributed to their switching behavior.

A seven-point Likert scale was selected for the questionnaire. Research by Schall (2003) has determined that a seven-point Likert scale is the optimum size when compared to five and ten point scales. Consequently, the questions used a standard seven-point Likert-type scale ranging from Strongly Disagree (1) to Strongly Agree (7). A pretest of the questionnaire was conducted from a random sample comprising 30 customers who had previously switched banks. The respondents answered the statements in the questionnaire and were requested to comment on any questions that they thought were ambiguous or unclear. Some minor rewording of the statements in the questionnaire was required as a result of the pretest.

**3.3. Data.** Data for this analysis were obtained through a mail survey sent to 1,960 households in Christchurch, New Zealand. The names and addresses for the mail survey were randomly drawn from the 2005 Christchurch Telephone Book.

A total of 454 useable surveys were returned within 14 days from the 1,960 mailed out surveys resulting in a useable response rate of 23.6%. A profile of sample respondents is presented in Table 1. From the total of 454 useable questionnaires, 19.6% (89) of the respondents switched banks during the last five years, while 80.4% (365) of respondents did not switch banks. The sample respondents were comprised of 49.32% females and 50.68% males.

Table 1. Profile of respondents

Variables	N		Total respondents	Switching banks	Non-switching banks
			Frequency (No. of respondents per option) %	Frequency (No. of respondents per option) %	Frequency (No. of respondents per option) %
Gender	Valid	Female	224 49.34	44 49.44	180 49.32
		Male	230 50.66	45 50.56	185 50.68
		Total	454 100.00	89 100.00	365 100.00
Age	Valid	18-24	29 6.39	9 10.11	20 5.48
		25-30	29 6.39	13 14.61	16 4.38
		31-35	15 3.30	5 5.61	10 2.74
		36-40	24 5.29	9 10.11	15 4.11
		41-45	42 9.25	8 8.99	34 9.32
		46-50	51 11.23	11 12.36	40 10.96
		51-55	35 7.71	7 7.87	28 7.67
		56-60	45 9.91	5 5.62	40 10.96
		61-65	34 7.49	4 4.49	30 8.22

Table 1 (continued). Profile of respondents

Variables	N		Total respondents	Switching banks	Non-switching banks
			Frequency (No. of respondents per option) %	Frequency (No. of respondents per option) %	Frequency (No. of respondents per option) %
		66-70	28 6.17	7 7.87	21 5.75
		71-75	40 8.81	3 3.37	37 10.14
		76+	82 18.06	8 8.99	74 20.27
		Total	454 100.00	89 100.00	36 100.00
Ethnic background	Valid	NZ European	365 80.34	65 73.03	300 82.19
		NZ Maori	7 1.54	2 2.25	5 1.37
		Pacific Islander	2 0.44	1 1.12	1 0.27
		European	29 6.39	4 4.49	25 6.85
		North American	2 0.44	1 1.12	1 0.27
		South American	10 2.20	3 3.37	7 1.92
		Asian	35 7.71	10 11.24	25 6.85
		Others	4 0.88	3 3.37	1 0.27
		Total	454 100.00	89 100.00	365 100.00
Education	Valid	Primary education	9 1.98	1 1.12	8 2.19
		Secondary education	117 25.77	18 20.22	99 27.12
		Fifth form	40 8.81	5 5.62	35 9.59
		Bursary	18 3.96	4 4.49	14 3.84
		Trade qualification	56 12.33	10 11.24	46 12.60
		Diploma	58 12.78	12 13.48	46 12.60
		Bachelor degree	91 20.04	21 23.60	70 19.18
		Postgraduate degree	49 10.79	14 15.73	35 9.59
		Others	16 3.52	4 4.49	12 3.29
		Total	454 100.00	89 100.00	365 100.00
Occupation	Valid	Professional	106 23.35	21 23.60	85 23.29
		Tradesperson	23 5.07	8 8.99	15 4.11
		Student	37 8.15	13 14.61	24 6.58
		Clerical	29 6.39	6 6.74	23 6.30
		Labor	8 1.76	2 2.25	6 1.64
		Unemployed	4 0.88	1 1.12	3 0.82
		Retired	160 35.24	19 21.35	141 38.63
		Sale/Service	26 5.73	5 5.62	21 5.75
		Home maker	17 3.74	6 6.74	11 3.01
		Others	44 9.69	8 8.99	36 9.86
		Total	454 100.00	89 100.00	365 100.00
Income	Valid	Under \$10,000	50 11.01	11 12.36	39 10.68
		\$10,000-\$19,999	76 16.74	12 13.48	64 17.53
		\$20,000-\$29,999	57 12.56	9 10.11	48 13.15
		\$30,000-\$39,999	82 18.06	17 19.10	65 17.80
		\$40,000-\$49,999	59 13.00	15 16.85	44 12.05
		\$50,000-\$59,999	38 8.37	6 6.74	32 8.77
		\$60,000-\$69,999	27 5.95	5 5.62	22 6.03
		\$70,000-\$79,999	18 3.96	5 5.62	13 3.56
		\$80,000-\$89,999	9 1.98	0 0.00	9 2.47
		\$90,000-\$99,999	8 1.76	0 0.00	8 2.19
		\$100,000-\$120,000	13 2.86	6 6.74	7 1.92
		\$120,000+	17 3.74	3 3.37	14 3.84
		Total	454 100.00	89 100.00	365 100.00

#### 4. Empirical analysis

All of the items in the questionnaire used to measure each construct were subjected to reliability tests using a Cronbach's Coefficient Alpha cut-off value of 0.60 (see Table 2) as suggested for newly developed questionnaires (Churchill, 1979).

The majority of the questionnaires were returned during the stated two week period. However, the means scores across the first 110 respondents who replied in the first week were compared with those of the last 110 respondents who replied in the second week. Extrapolation, as suggested by Armstrong and Overton (1977), was used and the results indicate that there is no evidence of a late response bias in this study.

The scores of the items representing each construct were totalled, and a mean score was calculated for each construct. Using these means, together with the demographic characteristics the logit equation was estimated. The estimated results are presented in Table 3.

Table 2. The reliability test for the measures of switching banks

Constructs		Items	Reliability test
Price factors		1. The bank charged high fees. 2. The bank charged high interest for loans. 3. The bank charged high interest for mortgages. 4. The bank provided low interest rates on savings accounts.	Cronbach Alpha = 0.861
Reputation factors		5. The bank was unreliable. 6. The bank was untrustworthy. 7. The bank was financially unstable.	Cronbach Alpha = 0.861
Responses to service failure		8. The bank corrected mistakes slowly. 9. Bank staff did not make any extra effort to solve problems.	Cronbach Alpha = 0.861
Customer satisfaction		10. I would not recommend the bank to others. 11. I was not satisfied with my banking experience. 12. I will not stay with the bank as a customer.	Cronbach Alpha = 0.891
Service quality dimensions	Convenience	13. The bank branch locations were inconvenient. 14. The bank's opening hours were inconvenient. 15. Accessing automatic teller machines was inconvenient.	Cronbach Alpha = 0.856
	Reliability	16. My bank account was administrated incorrectly. 17. The bank provided services that were not as promised. 18. The bank did not inform me of changes in services.	Cronbach Alpha = 0.860
	Staff that deliver services	19. Bank staff were impolite and rude. 20. Bank staff were unwilling to help me. 21. Bank staff were slow to provide services. 22. Bank staff did not readily respond to my requests. 23. Bank staff did not have the competence to solve problems. 24. Bank staff were not professional. 25. Bank staff did not make me feel safe when doing transactions. 26. Banks staff did not understand my specific needs.	Cronbach Alpha = 0.952
Service products		27. The bank did not offer a wide range of service products (e.g., loans, mortgages, credit cards). 28. The service products offered did not satisfy my specific needs.	Cronbach Alpha = 0.749
Effective advertising competition		29. The competing bank's advertising content influenced my decision to switch bank. 30. The competing bank's advertising words influenced my decision to switch banks. 31. The competing bank's advertising humor influenced my decision to switch banks.	Cronbach Alpha = 0.902
Customer commitment		32. You were very committed to the bank. 33. You intended to remain a customer of the bank. 34. You wanted to continue a relationship with the bank.	Cronbach Alpha = 0.839
Involuntary switching		35. Bank branches in my area were closed. 36. The bank moved to a new geographic location. 37. I moved to a new geographic location.	Cronbach Alpha = 0.634

Table 3. Logistic regression results

Variables	B	S.E.	Wald	df	Sig.
Reputation	-0.590	0.181	10.588	1	0.001*
Customer satisfaction	-0.416	0.146	8.048	1	0.005*
Service quality	-0.733	0.234	9.786	1	0.002*
Customer commitment	-0.879	0.153	33.128	1	0.000*
Yong-age group	1.397	0.374	13.967	1	0.000*
Low-education level	1.788	0.880	4.126	1	0.042*
Constant	8.998	1.727	27.130	1	0.000

Note: \* Significance at the .05 level.

In Table 3, the coefficient values for reputation, customer satisfaction, service quality, customer commitment, young-aged group, and low educational level are significant at 0.05 level. The results confirm that a bank with a bad reputation is more likely to cause customers to switch banks. This is also the case for poor customer satisfaction, poor service quality, lack of customer commitment, young-age group (18 to 40 years), and low educational level. However, the coefficient values for the other factors are not significant.

Additional information on switching behavior is obtained through the analysis of the marginal effects. For example, customer commitment is the most important factor that has impact on switching behavior when compared to all of the marginal effects shown in Table 4.

Table 4. Marginal effects of customers' switching behavior

Variables	Marginal effect	Rank
Customer commitment	-0.0547	1
Service quality	-0.0456	2
Reputation	-0.0367	3
Customer satisfaction	-0.0258	4
Low-education levels	0.0219	5
Young-age groups	0.0122	6
Constant	0.560	

### 5. Discussion

The marginal effect suggests that a unit decrease in customer commitment score results in an estimated 5.47% probability that customers will switch banks. Service quality has the second highest impact on switching behavior. A unit decrease in the service quality score results in an estimated 4.56% probability that customers will switch banks. Similarly, the marginal changes in the probability for reputation indicates that a unit decrease in the reputation score results in an estimated 3.67% probability that customers will switch banks. Thus, reputation is the third most important factor contributing to custom-

ers switching banks. The fourth most important factor is customer satisfaction. A unit decrease in customer satisfaction score results in an estimated 4.56% probability that customers will switch banks. Table 4 also shows that the probability of switching banks increases by 2.19% for lower educated customers, such as those with a primary education, bursary, or trade qualification. Based on the results of the marginal effect, low education and young-aged group rank as the fifth and sixth most important factors influencing the switching behavior.

**5.1. Managerial implications.** The research model and the empirical findings of this research have some practical implications for bank managers. Bank managers may use the research model of switching behavior developed in this research as a framework to investigate the reasons why their customers switch, or do not switch banks. The logit model used in this study may also provide managers with an insight into an empirical methodology that will assist them in their primary research when they analyze the reasons their customers switch, or do not switch banks.

The results of the empirical analysis identified that the following factors: customer commitment, service quality, reputation, customer satisfaction, young-aged group, and low-education have the highest probabilities associated with switching the banks.

This research reveals that a lack of customer commitment had the strongest influence on a customer's decision to switch banks. Achieving higher levels of customer commitment should result in more favorable behavioral intentions and should reduce the number of customers switching the banks. Hence, bank management should develop the strategies that encourage commitment among their customers. For example, creating an obligatory relationship, such as subjective norms (Bansal, Irving, and Taylor, 2004) or developing a level of trust that helps to enhance customer commitment (Berry and Parasuraman, 1991). A higher bank reputation, gained in part, through increasing customer commitment may also reduce the number of customers who switch to other banks.

The findings also confirm that a higher level of service quality is important as poor service quality influences customers to switch banks (Bitner, 1990; Zeithaml, Berry, and Parasuraman, 1996). Poor service quality may also have a negative impact on customer satisfaction (Brady, Cronin, and Brand, 2002). In order to improve a bank's performance on the dimensions of service quality identified in this study, bank managers should operationalize the following strategies. For convenience, bank managers may seek to improve the accessibility and delivery of their service products such as offering more geographically dispersed automatic teller machine (ATM) and making phone banking and electronic banking more user-friendly. For reliability, managers need to ensure that all domestic and international transactions are secure and accurate. Managers should ensure all instructions to customers are clear and easily understood and they should use human resource strategies and internal marketing programmes to hire and retain capable employees, regardless if they are high or low contact staff. Zeithaml and Bitner (1996) and Gronroos (1984a, 1984b) suggested that employees are of prime importance in service organizations because they are the service organization in the customer's eyes, they are all part time marketers, and they drive success in the service quality dimensions. Bank managers also need to ensure that they have the technology in place that provides accurate recordings of all transactions between customers and the bank, and also provides the technological support required by their employees.

The results indicate that bank reputation is the third most important factor that influences customers' decisions to switch banks. Vendelo (1998) suggests that reputation was a highly visible signal of an organization's capabilities and that reliability provided information about future performance. In particular, a good reputation helps to increase sales and exploits profitable marketing opportunities (Miles and Covin, 2000; Nguyen and LeBlanc, 2001). Therefore, bank management needs to strive to maintain the reputation of their bank and that of national brand at the highest level to help improve customer retention. This is particularly important for the New Zealand banking sector as it will be operating in a changing financial environment during the coming decade.

This study identified customer satisfaction as the fourth most important factor contributing to customers switching banks. Bank managers should seek to develop customer satisfaction strategies that focus on some of the drivers of satisfaction such as meeting customers' desired-service levels, preventing service problems from occurring, dealing effectively with dissatisfied customers, solving service prob-

lems promptly, and confronting customer complaints positively to enhance customer satisfaction and encourage favorable behavior intentions (Athanasopoulos, Gounaris, and Stathakopoulos, 2001).

This research has also found that respondents with lower educational accomplishments are inclined to switch banks. Bank management should conduct the research on this segment to determine the type of service products that may help to satisfy this segment. This may require bank managers to develop specific people strategies for this segment so employees can improve their understanding of this segment's specific needs and offer suitable technical advice and appropriate services.

The findings also suggest that young-aged customers are more likely to switch banks. It is logical that younger customers have a higher likelihood of leaving their bank as they often must adjust to substantial changes in their lives, such as leaving school, starting a new job, moving to different locations, renting or buying a house, getting married or starting a family. Bank management should offer young-aged customers attractive opportunities to remain with their bank such as providing ample information about other branches in different geographic areas, encouraging loyalty programs for younger consumers, and assisting with any transactions associated with the changing circumstances and needs of this segment.

## Conclusions

The findings of this research are consistent with the research results of Gerrard and Cunningham (2004), Gordon (2003), Colgate and Hedge (2001), Athanasopoulos, Gounaris, and Stathakopoulos (2001), Waterhouse and Morgan (1994), and Keaveney (1985). These authors found significant relationships between reputation, customer satisfaction, service quality, customer commitment, and switching behavior.

The demographic findings of this research are also consistent with some of the research results of Colgate and Hedge (2001) conducted on Australia and New Zealand banks. The authors found that switching behavior was most common with younger-aged and less educated customers. However, the results do differ from some of the findings of Colgate and Hedge (2001) who also determined that there were significant relationships between older-aged, high and low income, high education and customers' switching behavior.

Previous research has suggested that a high price (e.g., bank charges, interest charges on loans) and low interest paid on accounts have an impact on customer switching behavior (Keaveney, 1995; Colgate

and Hedge, 2001; Dawes, 2004). According to the findings of this study, these relationships were not evident in the New Zealand banking industry. The low impact of price on bank switching behavior in New Zealand may be attributed to a somewhat low variability of bank charges, interest charges and interest paid in a sector that has most recently been heavily dominated by four Australian owned banks.

### Limitations and future research

The sample used in this study was drawn from the Christchurch population in New Zealand. While overall, the demographic characteristics are a reasonable representation of the New Zealand population, the sample did contain a higher percentage of retired people and a lower percentage of New Zealand Maori than the general population. Future studies should consider the demographic and cultural implications of their specific geographic regions when they develop and examine the factors associated with bank switching behavior. Researchers could then compare their results with the results of this study.

Customer Commitment was identified in this study as the most important factor contributing to bank switching behavior, however it was measured as a single construct. Future studies may want to measure the effect of customer commitment on bank switching behavior at its underlying psychological states to improve the understanding of the construct.

This study focused on the perceptions of bank customers. Further research could explore the perceptions of bank employees to obtain the employees views on why customers switch banks. The perceptions of customers and employees could then be compared for further understanding of bank customer switching behavior.

Future studies could analyze the changes in the importance of the factors that contribute to bank switching behavior that have been identified in this study. For example, a longitudinal study over a few years could provide more information on the importance of price as the degree of competition either increases or decreases in the New Zealand banking sector.

### References

1. Ahmad, J. and Kamal, N. (2002), "Customer Satisfaction and Retail Banking: An Assessment of Some of the Key Antecedents of Customer Satisfaction in Retail Banking", *The International Journal of Bank Marketing*, Vol. 20, No. 4/5, pp. 146-160.
2. Allen, N. and Meyer, J.P. (1990), "The Measurement and Antecedents of Affective, Continuance, and Normative Commitment to the Organization", *Journal of Occupational Psychology*, Vol. 63, No. 1, pp. 1-18.
3. Armstrong, S.J. and Overton, T.S. (1977). "Estimating Response Bias in Mail Surveys", *Journal of Marketing Research*, Vol. 56, No. 2, pp. 57-61.
4. Ashill, N.J., Davies, K.M. and Thompson, L.W. (2003), "Characteristics of Marketing Organization in the New Zealand Financial Service Sector", *The International Journal of Bank Marketing*, Vol. 21, No. 2/3, pp. 80-93.
5. Athanassopoulos, A., Gounaris, S. and Stathakopoulos, V. (2001), "Behavioral Responses to Customer Satisfaction: An Empirical Study", *European Journal of Marketing*, Vol. 35, No. 5/6, pp. 687-707.
6. Avkiran, N.K. (1994), "Developing an Instrument to Measure Customer Service in Branch Banking", *International Journal of Bank Marketing*, Vol. 12, No. 6, pp. 10-18.
7. Bahia, K. and Nantel, J. (2000), "A Reliable and Valid Measurement Scale for the Perceived Service Quality of Banks", *International Journal of Bank Marketing*, Vol. 18, No. 2, pp. 84-91.
8. Balmer, J.M.T. and Stotving, S. (1997), "Corporate Identity and Private Banking: A Review and Case Study", *International Journal of Bank Marketing*, Vol. 15, No. 5, pp. 169-184.
9. Balmer, J.M.T. (1998), "Corporate Identity and the Advent of Corporate Marketing", *Journal of Marketing Management*, Vol. 14, No. 8, pp. 963-96.
10. Bansal, H.S., Irving, P.G. and Taylor, S.F. (2004), "A Three-Component Model of Customer Commitment to Service Providers", *Journal of the Academy of Marketing Science*, Vol. 32, No. 3, pp. 234-250.
11. Bass, F.M. (1974), "The Theory of Stochastic Preferences and Brand Switching", *Journal of Marketing Research*, (February), pp. 1.
12. Beckett, A., Hewer, P. and Howcroft, B. (2000), "An Exposition of Consumer Behaviour in the Financial Services Industry", *The International Journal of Bank Marketing*, Vol. 18, No. 1, pp. 15.
13. Ben-Akiva, M. and Lerman, S.R. (1995), *Discrete Choice Analysis-Theory and Application to Travel Demand* MIT Press, Massachusetts, London: Cambridge.
14. Berry, L.L. and Parasuraman, A. (1991), *Marketing Service*, Free Press, New York.
15. Bitner, M. (1990), "Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses", *Journal of Marketing*, Vol. 54, No. 2, pp. 69-82.
16. Blanchard, R.F. and Galloway, R.L. (1994), "Quality in Retail Banking", *International Journal of Services Industry Management*, Vol. 5, No. 4, pp. 5-23.
17. Brady, M.K., Cronin, J.J., and Brand, R.R. (2002), "Performance-only Measurement of Service Quality: A Replication and Extension", *Journal of Business Research*, 55 (1), 17-31.
18. Carole, P. and Ye, L. (2003), "Bank Managers' Direct Marketing Dilemmas-Customers' Attitudes and Purchase Intention", *The International Journal of Bank Marketing*, Vol. 21, No. 2/3, pp. 147-163.

19. Churchill, G.A. (1979), A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, Vol. 16, No. 1, pp. 64-73.
20. Churchill, G. and Surprenant, C. (1982), "An Investigation into the Determinants of Customer Satisfaction", *Journal of Marketing Research*, Vol. 19, No. 4, pp. 491-504.
21. Clemes, M., Mollenkopf, D. and Burn, D. (2000), "An Investigation of Marketing Problems across Service Typologies", *Journal of Services Marketing*, Vol. 14, No. 7, pp. 573-594.
22. Clugston, M. (2000), "The Mediating Effects of Multidimensional Commitment on Job Satisfaction and Intent to Leave", *Journal of Organizational Behaviour*, Vol. 21, No. 4, pp. 477-486.
23. Colgate, M. and Hedge, R. (2001), "An Investigation into the Switching Process in Retail Banking Services", *The International Journal of Bank Marketing*, Vol. 19, No. 4/5, pp. 201-212.
24. Colgate, M. and Norris, M. (2001), "Developing a Comprehensive Picture of Service Failure", *International Journal of Service Industry*, Vol. 12, No. 3/4, pp. 215-234.
25. Colgate, M. (1999), "Customer Satisfaction and Loyalty: How New Zealand Banks Need to Improve", *University of Auckland Business Review*, Vol. 1, No. 1, pp. 36-48.
26. Colgate, M. (2000), "Marketing and Marketing Information System Sophistication in Retail Banking", *The Service Industry Journal*, Vol. 20, No. 1, pp. 139-152.
27. Colgate, M. and Lang, B. (2001), "Switching Barriers in Consumer Markets: An Investigation of the Financial Services Industry", *The Journal of Consumer Marketing*, 18 (4/5), 332-348.
28. Colgate, M., Stewart, K. and Kinsella, R. (1996), "Customer Defection: A Study of the Student Market in Ireland", *International Journal of Bank Marketing*, Vol. 14, No. 3, pp. 23-9.
29. Crosby, L.A. and Stephens, N. (1987), "Effects of Relationship Marketing on Satisfaction, Retention, and Prices in the Life Insurance Industry", *Journal of Marketing Research*, Vol. 24, pp. 404-11.
30. Dawes, J. (2004), "Price Changes and Defection Level in a Subscription-Type Market: Can an Estimation Model Really Predict Defection Level"? *The Journal of Service Marketing*, Vol. 18, No. 1, pp. 317-325.
31. Day, R.L. and Landon, E.L.Jr (1977), "Toward a theory of consumer complaining behaviour", in Woodside, A.G., Sheth, J.N. and Bennett, P.D. (Ed.), *Consumer and Industrial Buying Behavior*, North-Holland, New York, pp. 425-37.
32. Denys, B. (2002), "Development in the New Zealand Banking Industry", *Reserve Bank of Zealand*, Vol. 65, No. 2, pp. 26-37.
33. Devlin, J.F. (1997), "Adding Value to Retail Financial Services", *Journal of Marketing Practice*, Vol. 3, No. 4, pp. 251-67.
34. Dube, L. and Shoemaker, S. (2000), "Brand Switching and Loyalty for Services" in Swartz, T.A. and Dawn, I. (Ed.), *Handbook of Services Marketing and Management*, CA: Sage, pp. 381-400.
35. East, R., Lomax, W. and Narain, R. (2001), "Customer Tenure, Recommendation and Switching", *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, Vol. 14, pp. 46-54.
36. Erol, C., Kaynak, E. and El-B dour Radi, (1990), "Conventional and Islamic Banks: Patronage Behaviour of Jordanian Customers", *International Journal of Bank Marketing*, Vol. 8, No. 4, pp. 25-35.
37. Fornell, C. (1992), "A National Customer Satisfaction Barometer: The Swedish Experience", *The Journal of Marketing*, Vol. 56, pp. 6-21.
38. Garbarino, E. and Johnson, M.S. (1999), "The Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships", *Journal of Marketing*, Vol. 63, April, pp. 70-87.
39. Garland, R. (2002). "Estimating Customer Defection in Personal Retail Banking", *The International Journal of Banking Marketing*, 20 (7), 317-325.
40. Gerrard, P. and Cunningham, J.B. (2000), "The Bank Switching Behaviour of Singapore's Graduates", *Journal of Financial Services Marketing*, Vol 5 No 2, pp. 118-28.
41. Gerrard, P. and Cunningham, J. B. (2004), "Consumer Switching Behaviour in the Asia Banking Market", *The Journal of Service Marketing*, Vol. 18, No. 2/3, pp. 215.
42. Gonzalez, M.V.R. and Guerrero, M.M. (2004), "New Competitors in Banking Service", *Journal of Financial Services Marketing*, Vol. 9, No. 2, pp. 126-137.
43. Gordon, F. (2003), "When does Commitment Lead to Loyalty?" *Journal of Service Research: JSR*, Vol. 5, No. 4, pp. 333-344.
44. Govender, K.K. (1999), "Managing the Bank Service Encounter a Conceptual Model", *American Marketing Association*, Vol. 10, No. 122, pp. 5.
45. Greene, W.H. (1990), *Econometric Analysis*. Macmillan, New York.
46. Gronroos, C. (1990), *Service Management and Marketing-Managing the Moments of Truth in Service competition*, Lexington Books, Massachusetts/Toronto.
47. Gronroos, C. (1984a), "A Service Quality Model and its Marketing Implication", *European Journal of Marketing*, Vol. 18, No. 4, pp. 36-44.
48. Gronroos, C. (1984b), "Strategic Management and Marketing in the Service Sector", *Studentlitteratur*, Chartwell-Bratt.
49. Hair, J.F., Bush, R.P. and Ortinau, D.J. (2000), *Marketing Research: A Practical Approach for the New Millenium*. Singapore: McGraw Hill.
50. Hirschman, A.O. (1970), "Exit, Voice and Loyalty", Cambridge, MA: Harvard University Press.

51. Hite, R.E. and Fraser, C. (1988), "Meta-Analyses of Attitudes Toward Advertising by Professionals", *Journal of Marketing*, Vol. 52, July, pp. 95-105.
52. Hull, L. (2002), "Foreign-owned Banks: Implications for New Zealand's Financial Stability", Discussion Paper Series, DP2002/05.
53. Hunt, H. Keith (1977), "CS/D – Overview and Future Research Directions", in Hunt, H. Keith, (Ed.), *Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction*, Cambridge, MA: Marketing Science Institute, pp. 455-488.
54. Kamal, N., Ahmad, J. and Khalid, AI-K. (1999), "Islamic Banking: A Study of Customer Satisfaction and Preferences in Jordan", *The International Journal of Bank Marketing*, Vol. 17, No 3, pp. 135.
55. Kamilia, B. and Jacques, N. (2000), "A Reliable and Valid Measurement Scale for the Perceived Service Quality of Banks", *The International Journal of Bank Marketing*, Vol. 18, No. 2, pp.18.
56. Keaveney, S.M. (1995), "Customer Switching Behavior in Service Industries: An Exploratory Study", *Journal of Marketing*, Vol. 59, No. 2, pp. 71-82.
57. Kelley, S.W., Hoffman, K.D. & Davis, M.A. (1995), "A Typology of Retail Failures and Recoveries", *Journal of Retailing*, Vol. 69, Winter, pp. 429-52.
58. Kiser, E.K. (2002), "Household Switching Behaviour at Depository Institutions: Evidence from Survey DATA", *Antitrust Bulletin*, Vol. 47, No. 4, pp. 619-640.
59. Kotler, P. (1982), *Marketing for Nonprofit Organizations*, (2<sup>nd</sup> Ed.). Prentice-Hall, London.
60. Levesque, T. and McDougall, G.H.G. (1996), "Determinants of Customer Satisfaction in Retail Banking", *International Journal of Bank Marketing*, Vol. 14, No. 7, pp. 12-20.
61. Lewis, B.R. and Bingham, G.H. (1991), "The Youth Market for Financial Services", *International Journal of Bank Marketing*, Vol. 9, No. 2, pp. 3-11.
62. Lovelock, C.H., Patterson, P.G. and Walker, R.H. (1998), *Services Marketing: Australia and New Zealand*. Australia, Prentice- Hall, Australia.
63. Maddala, G.S. (1993), *The Econometrics of Panel Data*. Elgar.
64. Miles, M.P. and Covin, J.G. (2000), "Environmental Marketing: A Source of Reputational, Competitive and Financial Advantage", *Journal of Business Ethics*, Vol. 23, No. 3, pp. 29-311.
65. Mittal, B. and Lasser, W.M. (1998), "Why do Customers Switch? The Dynamics of Satisfaction versus Loyalty", *The Journal of Services Marketing*, Vol. 12, No. 3, pp. 177.
66. Mittal, B., Ross, W. and Baldasare, P.M. (1998), "The Asymmetric Impact of Negative and Positive Attribute-Level Performance on Overall Satisfaction and Repurchase Intentions", *Journal of Marketing*, Vol. 62, No. 1, pp. 33-47.
67. Nguyen, N. and Leblanc, G. (2001), "Corporate Image and Corporate Reputation in Customers' Retention Decisions in Services", *Journal of Retailing and Consumer Services*, Vol. 8, No. 4, pp. 227-36.
68. Ogilvie, D.G. (1997), "Losing Customers the Old Fashioned Way", *Banker News*, Vol. 5, No. 13, pp. 6.
69. Oliver, R.L. (1997), *Satisfaction: A Behavioral Perspective on the Consumer*, McGraw Hill, New York.
70. Parasuraman, A., Zeithaml, V. and Berry, L. (1985), "A Conceptual Model of Service Quality and its Implications for Future Research", *Journal of Marketing*, Vol. 49, Fall, pp. 41-50.
71. Parasuraman, A., Zeithaml, V.A. and Berry, L. (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality", *Journal of Retailing*, Vol. 64, Spring, pp. 12-40.
72. Parasuraman, A., Zeithaml, V.A. and Berry, L. (1991), "Refinement and Reassessment of the SERVQUAL scale", *Journal of Retailing*, Vol. 67, No. 4, pp. 420-450.
73. Philip, G. and Bart, C. (2001), "Bank Service Quality: A Comparison between A Publicly Quoted Bank and Government Bank in Singapore", *Journal of Financial Services Marketing*, Vol. 6, No. 1, pp. 50-66.
74. Rao, H. (1994), "The Social Construction of Reputation: Certification Contests, Legitimation, and the Survival of Organizations in the Automobile Industry: 1895-1912", *Strategic Management Journal*, Vol. 15, pp. 29-44.
75. Reber, C. (1999), "New Competitors in Financial Services, the Rise of Non-Banks and Near Banks", *Marketing and Research Today*, 1999 November, pp. 31-44.
76. Reichheld, F.F. and Sasser, W.E. Jr. (1990), "Zero Defections: Quality Comes to Services", *Harvard Business Review*, 1990 (September-October), pp. 105-11.
77. Rust, R.T. and Oliver, R.L. (1994), "Service Quality: Insights and Managerial Implications from the Frontier", in R.T. Rust & R.L. Oliver, (Ed.). *Service Quality: New Direction in Theory and Practice*. Thousand Oaks: Sage Publications, pp. 1-19.
78. Rust, R.T. and Zahorik, A.J. (1993), "Customer Satisfaction, Customer Retention and Market Share", *Journal of Retailing*, Vol. 69, Summer, pp. 193-215.
79. Schall, M. (2003), "Best Practice in the Assessment of Hotel-guest Attitudes", *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 44, No. 2, pp. 51-65.
80. Singh, J. (1990), "Voice, Exit, and Negative Word-of-Mouth Behaviour: An Investigation across Three Service Categories", *Journal of the Academy of Marketing Sciences*, Vol. 18, pp. 1-5.
81. Stefan, M. (2004), "Consequences of Perceived Acceptability of a Bank's Service Failures", *Journal of Financial Services Marketing*, Vol. 8, No. 4, pp. 367.
82. Stewart, K. (1998), "An Exploration of Customer Exit in Retail Banking", *International Journal of Bank Marketing*, Vol. 16, No. 1, pp. 6-14.

83. Taylor, S.A. and Baker, T.L. (1994), "An Assessment of the Relationship between Service Quality and Customer Satisfaction in the Formation of Consumers' Purchase Intentions", *Journal of Retailing*, Vol. 70, No. 2, pp. 163-78.
84. Train, K. (1986), *Qualitative Choice Analysis – Theory, Econometrics, and an Application to Automobile Demand*, Cambridge, Massachusetts: MIT Press, London.
85. Vendelo, M.T. (1998), "Narrating Corporate Reputation", *International Studies of Management and Organization*, Vol. 28, No. 3, pp. 120-37.
86. Wang, Y.G., Lo, H.P. and Hui, Y.V. (2003), "The Antecedents of Service Quality and Product Reputation: Evidence from the Banking Industry in China", *Managing Service Quality*, Vol. 13, No. 1, pp. 72-83.
87. Waterhouse, K. and Morgan, A. (1994), "Using research to help to keep good customers: understanding the process of customer defection and developing a strategy for customer retention", *Marketing & Research Today*, Vol. 22, No. 3, pp. 181-94.
88. Yue, H. and Tom, G. (1995), "How the Chinese Select their Banks", *Journal of Retail Banking*, Vol. XVI, Winter No. 4.
89. Zeithaml, V.A. and Bitner, M.J. (1996), *Services Marketing*, McGraw-Hill, New York.
90. Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The Behavioral of Consequence of Service Quality", *Journal of Marketing*, Vol. 60, pp. 31-46.
91. Zhu, F.X., Wymer, W. Jr. and Chen, I. (2002), "IT-Based Services and Service Quality in Consumer Banking", *International Journal of Service Industry Management*, Vol. 13, No. 1, pp. 69-90.
92. Ennew C. and Binks M.(1996) *The Impact of Service Quality and Service Characteristics on Customer Retention: Small Business and Their Banks in the UK*", *British Journal of Management*, Vol. 7 pp. 219- 230.

## Appendix A

Value of dummy variables for gender to income

GEN (+/-) = Dummy variables for gender:

1 if respondent is a male; 0 otherwise.

AGE (+/-) = Dummy variables for age group:

Age group 1; 1 if respondent age is from 18 to 40 years old; 0 otherwise.

Age group 2; 1 if respondent age is from 40 to 60 years old; 0 otherwise.

Age group 3; 1 if respondent age is from 61 to over 75 years old; 0 otherwise.

ETH (+/-) = Dummy variables for ethnic background:

Ethnic background 1; 1 if respondent ethnic background is New Zealand European; 0 otherwise.

Ethnic background 2; 1 if respondent ethnic background is Others (e.g., New Zealand Mario, Pacific Islander, North American, South American, Asian); 0 otherwise.

EDU (+/-) = Dummy variables for educational qualifications:

Educational qualification 1; 1 if respondent completed low education (e.g., primary, secondary, fifth form, bursary, and trade qualification); 0 otherwise.

Educational qualification 2; 1 if respondent completed Diploma; 0 otherwise.

Educational qualification 3; 1 if respondent completed high education (e.g., Bachelor Degree, Postgraduate Degree); 0 otherwise.

OCC (+/-) = Dummy variables for occupation status:

Occupation status 1; 1 if respondent is white-collar (e.g., professional, Tradesperson, Sales); 0 otherwise.

Occupation status 2; 1 if respondent is blue-collar (e.g., labour, farmer); 0 otherwise.

Occupation status 3; 1 if respondent is a student; 0 otherwise.

Occupation status 4; 1 if respondent is Others (e.g., Clerical, Unemployed, Retired, Home Maker); 0 otherwise.

INC (+/-) = Dummy variables for annual income levels:

Income Level 1; 1 if respondent is low income level (e.g., Under \$10,000-\$29,999); 0 otherwise.

Income Level 2; 1 if respondent is middle income level (e.g., \$30,000-\$59,999); 0 otherwise.

Income Level 3; 1 if respondent is high incomer level (e.g., \$60,000 and over); 0 otherwise.