Christopher Gan (New Zealand), Mike Clemes (New Zealand), Jing Wei (New Zealand),
Betty Kao (New Zealand)

An empirical analysis of New Zealand bank customers' satisfaction

Abstract

Competition within the New Zealand financial service market is strong as there have been new entrants into the market, including mergers and exits, over the last ten years. In order to retain customers, customer satisfaction is a crux issue for bank management. However, several researchers on banking have placed more emphasis on bank switching behavior to improve customer retention (Clemes et al., 2007; Lees et al., 2005; and Gan et al., 2006). However, there is a lack of research regarding the fundamental factors that affect customer satisfaction in New Zealand's banks. This study identifies and examines the factors influencing bank customers' satisfaction in the New Zealand banking industry. The relationship between bank customers' overall satisfaction and influential factors such as corporate image and price (fees charged) is also investigated.

The results of this study indicate that service quality has the most influence on bank customers' satisfaction compared to value and corporate image. The results also provide support for the moderating effect of value on the relationship between service quality and customer satisfaction, and the moderating effect of corporate image on the relationship between the service quality dimensions identified in this study and service quality. In addition, the results also reveal that demographic variables (age, income, and occupation) are also significant in explaining bank customers' satisfaction in the New Zealand banking sector.

Keywords: customer satisfaction, service quality, banking industry.
JEL Classifications: G2, G20, G21.

Introduction

Bank customer satisfaction can be regarded as a bank fully meeting its customers' expectations (Bloemer, Ruyter, and Peeters, 1998). Satisfaction is a feeling or attitude formed by bank customers after service, which directly links to the various purchasing behaviors (Jamal and Naser, 2002). Previous research on bank customer satisfaction suggests that customer satisfaction leads to a higher retention of customers, more profit, and increases customer loyalty. Higher levels of satisfaction also encourage banks to improve service quality, introduce innovative products, and provide efficient bank management (Anderson, Fornell and Lehmann, 1994; Cohen et al., 2006). Therefore, bank customer satisfaction is seen as one of the key factors for banks' survival in a competitive, global financial market. Banks must deliver quality services that result in higher levels of customer satisfaction to succeed in today's competitive banking environment (Anderson et al., 1994; Cohen et al., 2006).

Competition within the New Zealand financial service market is strong given there has been new entrants into the market, including mergers and exits, over the last ten years. In order to retain customers, customer satisfaction becomes a crux issue for bank management. However, research on banking has placed more emphasis on bank switching behavior to help retain customers (Clemes et al., 2007; Lees et al., 2005; and Gan et al., 2006). There is a lack of research on the fundamental factors that affect customer' satisfaction in New Zealand banks. This study examines the factors that influence bank cus-

tomers' satisfaction in New Zealand's banking industry. The study also investigates the primary dimensions of service quality and the moderating role of image between the primary dimensions of service quality and the service quality construct in a banking context.

1. The New Zealand banking industry

Since the first trading bank opened in 1840, banks have been servicing the financial needs of New Zealanders for over 160 years. Until 1987, the banks in New Zealand were restricted by government legislation (New Zealand Bankers' Association, 2006). The legislation included the requirements of establishing a bank and the services it could provide. For example, trading banks were restricted to provide services for the financial needs of businesses and checking accounts for individuals, while savings banks were restricted to providing other financial services to individuals.

The Reserve Bank of New Zealand (RBNZ) was established in the mid 1930s. As a supervision government agent, the RBNZ uses monetary policies to control and monitor the availability and conditions of credit provided by financial institutions to promote sound and healthy economic growth in New Zealand. The heavy legislation and regulation posed by government and the RBNZ, limited the level of competition within banking industry. As a result of monopoly power in the banking industry, bank customers suffered poor service quality and more expensive services. Since 1950, non-bank financial institutions began to grow strongly in niche service areas in which the banks were restricted (for example, building societies, finance companies, and mer-

chant banks). In 1960, finance companies accounted for only 1% of total deposits, but by the end of 1984 this increased to 20% (New Zealand Bankers' Association, 2006).

From 1957 to 1984, the New Zealand government slowly reduced the restrictions on financial institutions. The rapid growth in financial markets in the early 1980s made the legislatively-imposed categories of New Zealand financial institutions increasingly outdated. This inevitably led to extensive deregulation of the financial industry in the mid 1980s (Tripe, 2004). Deregulation enabled banks and other financial institutions to freely develop their own strategies and programs to best meet customer needs. In addition, deregulation removed the entry barriers for foreign banks and increased the competition in New Zealand banking industry. Banks must now be competitive to retain existing customers and attract new ones. Deregulation forces bank management to focus on delivering quality services to enhance customer satisfaction in order to increase their competitive position and survive in the market (Gan et al., 2006).

2. Factors affecting bank customers' satisfaction and hypotheses development

Parasuraman et al. (1985) argued that service quality involves not only the outcome but also the delivery process. The authors described service quality as a form of attitude that results from the comparison of consumer expectations with the service performance delivered. Furthermore, service quality relates to satis-

faction but the two constructs are not the same (Cronin and Taylor, 1992; Parasuraman et al., 1987).

Several researchers on customer satisfaction in the banking industry have identified important factors driving customer satisfaction (Colgate, 1997, 1999; Cohn et al., 2006, Gan et al., 2006). For example, Anderson and Sullivan (1993) conducted a study in Sweden and found that the level of bank customers' satisfaction increased with the level of perceived service quality. Anderson and Sullivan's (1993) findings are consistent with Cronin and Taylor's (1992) view that service quality leads to customer satisfaction. Colgate (1999) suggests that an increased level of customer satisfaction and loyalty are positively linked to a firm's financial return. Satisfied customers are likely to recommend their bank to their friends and relatives. The author suggests the overall customer service, close relationships, and competitive fees and charges are the top three drivers of New Zealand bank customers' satisfaction.

Figure 1 shows that bank customers form their overall service quality perceptions based on four primary dimensions: interaction quality, physical environment quality, outcome quality, and network quality. Further, the service quality perceptions perceived by bank customers are expected to influence their overall satisfaction. Value (price) is expected to have a moderating effect between service quality and customer satisfaction. In addition, corporate image is expected to moderate between service quality and interaction quality, physical environment quality, outcome, and network quality, respectively.
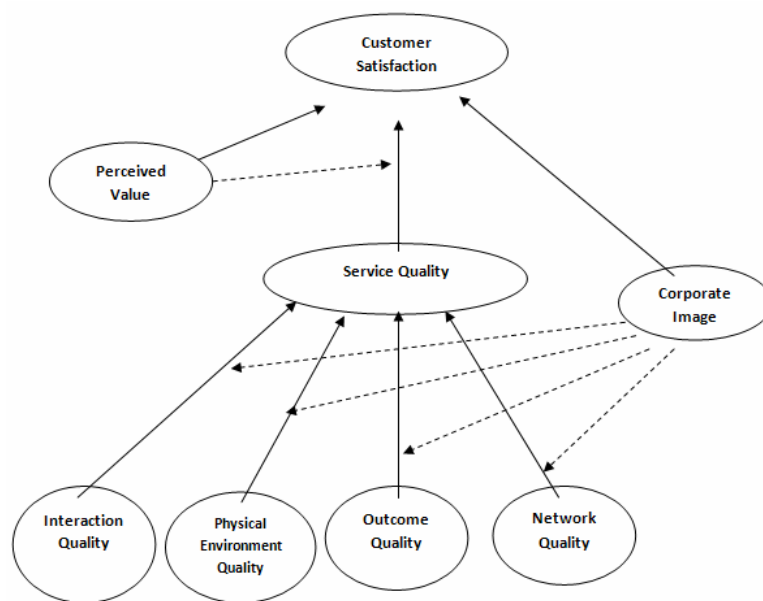

Fig. 1. A multi-level of bank customers' satisfaction

2.1. Perceived service quality. Increasing competition in the banking industry in the past two decades has forced bank management to understand the importance of service quality in satisfying bank cus-

tomers (Yavas, Benkenstein, and Stuhldreier, 2004). Researchers have noted in the banking literature that it is much more expensive for banks to attract new customers than to keep their existing customers

(Schneider et al., 1998; Spechler, 1989; Uller, 1989). Service quality has been identified as an important contributing factor for a financial organization to retain its customers (Ennew and Binks, 1996). In order to maintain a competitive advantage within the industry and keep existing customers, it is critical for banks to constantly improve their service quality (Avkiran, 1999).

Jamal and Nasser (2002) investigate the impact of the service quality dimensions on bank customer satisfaction. Their survey study shows the core and relational service quality dimensions have a positive impact on customer satisfaction, and they conclude that service quality is a causal antecedent of customer satisfaction. Lassar, Manolis, and Winsor (2000) examine the effects of service quality on private bank customers and suggest that the technical and functional dimensions of service quality provide a better predictive power of customer satisfaction than most of the SERVQUAL dimensions. Yavas, Bilgin, and Shemwell (1997) study bank customers in Turkey. The authors investigate the relationships between service quality, and customer satisfaction, complaint behavior and commitment, and conclude that service quality leads to customer satisfaction.

2.2. Interaction quality. Numerous bank services involve personal interactions, and therefore, researchers suggest that the interaction quality (the relationships between bank service staff and bank customers during service delivery) is an important factor when customers' evaluate service quality (Ennew and Binks, 1999; McDougall, Gordon, Levesque, and Terrence, 1994). Ennew and Binks (1999) study the relationship between bank customers' (small business segment) and employees' participation in bank service provision. The authors' conceptualize bank service quality from a functional and technical perspective as suggested by Gronroos (1984). Dimensions such as perceived price, core product, staff knowledge, advice offered, efficiency in operation and accessibility also affect the service quality perceptions of consumers (Ennew and Binks, 1999).

Ojasalo (2003) finds that the interactions during the service process have an effect on customers' perceptions of service quality. Further Ko and Pastore (2005) demonstrate the importance of interaction quality during the production and consumption of services due to the high levels of face-to-face communication. This study identifies interaction quality as one of the primary dimensions to evaluate service quality. The following relationship is hypothesized.

H₁: Interaction quality positively affects bank customers' service quality perceptions.

2.3. Physical environment quality. Marketing researchers are concerned about the physical environment, or non-human factors, that affect the customers' perceptions of service quality (Brady and Cronin, 2001). Bitner (1992) refers to the non-human factors as the servicescape, which is the service environment that customers experience during service delivery. Bitner (1992) demonstrates that the service environment has a significant impact on customers' perceptions of overall service quality.

In the banking sector, LeBlanc and Nguyen's (1988) study shows that the physical environment quality has a large impact on perceived service quality. Howcroft (1993) identifies five important service quality dimensions for banks revealing that the surrounding environment is one of the important dimensions used to measure overall service quality. Therefore, the following relationship is hypothesized.

H₂: Physical environment quality positively affects bank customers'service quality perceptions.

2.4. Outcome quality. McDougall, Gordon, Levesque, and Terrence (1994) describe outcome quality as the performance related aspects of service quality, that are determined by: the skills and know-how of the employees, the ability of the organization and its employees to keep their promises with customers, and the employees ability to solve problems when they occur. In the context of the banking industry, outcome quality is considered a crucial aspect for bank service quality evaluation (LeBlanc and Nguyen, 1988; Lewis, 1991). McDougall and Levesque (1994) note that bank service quality is comprised of three underlying dimensions: processes, outcomes, and the tangibles. Blanchard and Galloway (1994) conceptualize service quality using three criterions related to the process/outcome perspective, the subjective/objective perspective and the soft/hard perspective of service quality in the United Kingdom retail banking industry. The following relationship is hypothesized.

H₃: Outcome quality positively affects bank customers' service quality perceptions.

2.5. Network quality. The rapid growth in the information technology and network systems during the past decade has introduced major changes in the global economy and business environment (Qureshi et al., 2008). Information technology development has increased the communications and transactions between banks and their clients in the banking industry (Booz et al., 1997). Technological innovations lead to time saving and improved service quality for bank customers (Qureshi et al., 2008). In order to remain competitive, banks are increasing their technology-based service options to deliver

dependable services to their consumers (Al-Hawari et al., 2005; Fitzsimmons and Fitzsimmons, 1997). Herington and Weaven (2007) study bank e-service quality and collect data from 200 Australian respondents who regularly used internet banking. The results show that personal needs, internet site organization, user-friendliness of the site, and site efficiency as the most significant factors that influence bank customers' e-service quality perceptions. The following relationship is hypothesized.

H₄: Network quality positively affects bank customers' service quality perceptions.

2.6. Perceived value. Research on the relationship between value/pricing and customer satisfaction has been widely conducted. Matzler, Wurtele, and Renzi (2006) describe the role of price as the determinant during the purchase and after the purchase process. Prior research in value (price)-satisfaction relationships include pricing policy, money-back guarantees (Heskett et al., 1990), low and fixed prices (Ortmeyer et al., 1991) and fair and honest pricing (Ayres and Nalebuff, 2003). The results of these studies are similar, where "good" value (price) causes an increase in customer satisfaction. Value perceptions are considered to be the result of a cost benefit trade-off (Zeitharnl, 1988), that compares the price customers have to pay with the quality they receive (Monroe, 1990).

This causal relationship was also confirmed by other researchers in a number of empirical studies across various industries. For instance, Fornell et al. (1996) investigate the impact of value (price) and perceived quality on overall satisfaction in seven major economic sectors in the U.S (including the financial and insurance sector). Both value (price) and perceived service quality have a positive effect on customers' overall satisfaction.

Varki and Colgate (2001) study the perceptions of value (price) in the banking industry in the U.S. and New Zealand. The authors' results show that value (price) perceptions directly influence customers' satisfaction. Matzler, Wurtele, and Renzi (2006) describe similar results in their study on retail banking in Austria and conclude that price satisfaction positively influences bank customers' overall satisfaction. Leverin and Liljander (2006) suggest that bank customer satisfaction is influenced by factors such as the price of services, or the number and severity of negative critical incidents. Similarly, Levesques et al.'s (1996) study reveals that bank charges and interest rates determine the overall satisfaction level of the customers. The following relationship is hypothesized.

H₇: Perceived value moderates the relationship between service quality and customer satisfaction.

2.7. Corporate image. Image has been described as subjective knowledge (Boulding, 1956), as an attitude (Hirschman et al., 1978), and as a combination of product characteristics that are different from the physical product (Erickson et al., 1984). Gronroos (1984) argued that image was critical to service firms, and to a greater extent, determined by customers' assessment of the services they receive. The author conceptualized customers' perceived service quality from three aspects that included image.

Naser et al. (1999) and Chen et al.'s (2005) studies explain "the image of the bank" as one of the most important bank selection criteria for customers. Aydin and Ozer (2005) claim that corporate image results from customers' consumption experiences and those experiences, in turn, determine customers' overall service quality perceptions. Similarly, Lu, Zhang, and Wang (2009) recommend using corporate image as a moderator for the relationship between interaction quality, physical environment quality, outcome quality and service quality. The authors argue that customers may forgive negative service quality if a company has a good image bearing in their customers' minds.

Bloemer, Ruyter, and Peeters (1998) also find the image of a bank has a clear, positive influence on service quality perceptions. Nguyen and LeBlanc (1998) collect data from 1,224 customers in the banking industry and found that bank customers who received a higher level of service quality form a favorable corporate image. Che-Ha and Hashim (2007) assert that brand aroused feelings as one of the important factors in explaining customer satisfaction. Similarly, Mihelis et al. (2001) measure bank image by credibility (name, reputation), technological excellence and the ability to satisfy future customers' needs. The following relationship is hypothesized.

H₈: Corporate image moderates the relationship between overall service quality and each of the service quality primary dimensions: interaction quality (H₈ₐ), physical environment quality (H₈ᵦ), outcome quality (H₈ᵤ), network quality (H₈ᵤ), and lending quality (H₈ₑ).

The literature also revealed the existence of a positive relationship between value, corporate image, service quality, and bank customer satisfaction. Therefore the following relationships are hypothesized.

H₉: A higher perception of value has a positive impact on customer satisfaction.

H₁₀: A higher perception of bank's corporate image has a positive impact on customer satisfaction.

H₁₁: A higher perception of service quality positively affects customer satisfaction.

3. Methodology and data

3.1. Questionnaire development. The questionnaire developed for this study was based on the findings from the literature review and feedback from the focus groups. In order to provide additional insights into the proposed service quality dimensions and the related constructs to help develop the questionnaire, focus group interviews were conducted.

Focus group discussions were also used to assist in developing the most appropriate, timely, and relevant survey questions. In accordance with homogeneity, as recommended by Hair, Bush and Ortinau, (2000) in focus group research, the first focus group consisted of nine customers who banked with several New Zealand banks. The participants were asked to identify the attributes that have an impact on their evaluation of a bank service based on several service quality dimensions. They were asked to identify the factors that they considered to be the most important while forming their perceptions of the service quality experiences they encountered at a bank.

They were also encouraged to identify any additional attributes or the factors related to the service quality dimensions that could influence their perceptions about bank services. The second focus group consisted of eight bank staff and managers. Bank staff and managers were asked to list the attributes or factors they considered as important in their personal banking experiences.

The questionnaire was pretested using a random sample of 30 bank customers. The pre-test was conducted to obtain feedback on the readability, comprehensibility, wording, order effects, and any ambiguity of the questionnaire and its statements (Hair et al., 2000). Following the pre-test some minor changes were made to the survey instrument.

The questionnaire consists of three sections. The first section is designed to collect data relating to the dimensions of service quality that impact bank customers' satisfaction. Section two measures the bank customers' overall evaluation of the constructs: service quality, satisfaction, corporate image, and perceived value. The last section identifies the demographic characteristics of the bank customers who participated in this study.

3.2. Data. The data was drawn from Auckland Savings Bank (ASB) customers in Christchurch City, New Zealand. The ASB is a well-established bank with branches throughout New Zealand. The survey questionnaires were distributed in front of the five ASB bank branches during business hours. The survey pack included a copy of the cover letter, the questionnaire, and a prepaid envelope. The survey questionnaire was designed and implemented according to the Dillman Total Design Method (1991), which has proven to result in improved response rates and data quality. The design of the questionnaire was based on multiple-item measurement scale. A seven-point Likert scale was adopted because the scale has the optimum size compared to five and ten point scales (Schall, 2003). Respondents were asked to evaluate the items of the constructs (interaction quality, physical environment quality, outcome quality and network quality) using a seven-point Likert scale. The descriptors ranged from 1 (strongly disagree) to 7 (strongly agree).

A total of 1200 questionnaires were distributed to respondents in front of the five ASB bank branches during business hours over a period of three weeks. A total 425 (35.4%) survey questionnaires were returned. Thirteen of the questionnaires were incomplete and considered not unsuitable for use in the study. This resulted in a total of 412 (34.3%) usable response rate.

3.3. Empirical model of bank customers' satisfaction. In order to investigate the factors affecting bank customers' satisfaction in New Zealand, we consider a multivariate long-run relationship of the following general form:

$$CS = CI + VLE + SQ + Gender + Middle\ Age + Old\ Age + Middle\ Education + High\ Education + Occupation2 + Occupation3 + High\ Income + Middle\ Income + Ethnicity1 + Ethnicity2 + \varepsilon, \qquad (1)$$

where

$$SQ = IQ + PEQ + OQ + NWQ + LQ, \qquad (2)$$

CS is the customer satisfaction, *CI* is the corporate image, *VLE* is the perceived value, *SQ* is the overall service quality, *IQ* is the interaction quality, *PEQ* is the physical environment quality, *OQ* is the outcome quality, *NWQ* is the network quality, *LQ* is the lending quality.

Demographic characteristics: *Gender* (+/-) = 1 if respondent is a female; 0 otherwise, *Middle Age* (+/-) = 1 if respondent age is between 36 to 55 years old; 0 otherwise, *Old Age* (+/-) = 1 if respondent age is above 56 years old and above; 0 otherwise, *Middle Education* (+/-) = 1 if respondent completed diploma and certification; 0 otherwise, *High Education* (+/-) = 1 if respondent completed bachelor's degree and above; 0 otherwise, *Occupation2* (+/-) = 1 if respondent is self-employed; 0 otherwise, *Occupation3* (+/-) = 1 if respondent is student; 0 otherwise, *High Income* (+/-) = 1 if respondent income level is NZ$80,001 and above; 0 otherwise, *Middle Income* (+/-) = 1 if respondent income level is NZ$40,001-

80,000; 0 otherwise, *Ethnicity*1 (+/-) = 1 if respondent is New Zealand European; 0 otherwise, *Ethnicity*2 (+/-) = 1 if respondent is Asian; 0 otherwise, ε = Error term.

Several researchers propose that customers' perceptions of the service quality dimensions, overall service quality and satisfaction may differ according to their demographic characteristics (Clemes et al., 2007; Clemes, Ozanne & Laurensen, 2001; Gagliano & Hathcote, 1994). Webster (1989) studied demographic characteristics and their relationship with service quality perceptions and found that consumers' demographic characteristics are closely related to service quality.

Similarly, Gagliano and Hathcote (1994) also found that customers' demographic characteristics played an important role in determining perceived service quality. In this study, demographic characteristics such as age, gender, education, occupation, ethnicity and income were hypothesized to influence bank customers' satisfaction. For example, Gagliano's (1994) research determined which age group has the greatest impact on bank customers' satisfaction since different age groups reflect differences in the marketing mix and the types of banking services used by the respondents.

In our study, Age is regrouped into Young (18 to 35 years old), Middle (36 to 55 years old), and Older (56 years and over). The educational demographic factors were regrouped from seven groups to three groups, Low Education (high school and under), Middle Level Education (diploma and certification), and High Education (bachelor's degree and over). Similarly, the eight annual income groups are regrouped into three groups, Low Income (NZ$40,000 and under), Middle Income (NZ$ $40,001-80,000), and High Income (NZ$80,001 and over). Occupation is regrouped into 8 groups: professional, self-employed, students, civil servants, laborers and farmers, sales and services, unemployed, and home maker, retired, and others and ethnicity into 5 groups (NZ European, European, Asians, NZ Maori and Pacific Islander and others). The demographic variables are dummy variables and one dummy variable is dropped from each group to avoid the dummy variable trap problem in the model.

3.3. Moderated multiple regression (MMR). In recent years, many researchers have recognized the important roles of moderating effects in many social and behavioral studies (Whisman, 1993). The moderating effect is used to detect not only the main effects of independent variables, but also their interactive effects (Snell & Dean, 1994). Moderated multiple regression (MMR) is often used to detect the existences of moderating effects in a study. MMR consists of comparing two least-squares re-

gression equations (Cohen & Cohen, 1983). For example, given dependent variable *Y*, a predictor *X* and a second predictor *Z* hypothesized to interact with *X* in affecting *Y*, the first regression equation (Step I) tests the additive model of the main effects for predicting *Y* from *X* and *Z* (Aguinis et al., 1996). The second equation (Step II) adds a third term, which carries information regarding the *X* by *Z* interaction, which is obtained by multiplying the predictors (*X* x *Z*). The interaction term can be computed for each subject by multiplying the two predictors as follows (Cohen & Cohen, 1983):

$$\hat{Y} = a + b_1 X + b_2 Z + b_3 XZ. \tag{3}$$

Rejecting the null hypothesis that $b_3 = 0$ indicates the presence of an interaction or moderating effect.

For example, to estimate the moderating relationship between service quality and customer satisfaction using value (price) as a moderator, we estimate the following equation:

$$CS = SQ + VLE + (SQ \text{ x } VLE). \tag{4}$$

Similarly, to estimate the moderating relationship between interaction quality and service quality using corporate image as a moderator, we regress the following equation:

$$SQ = IQ + CI + (IQ \text{ x } CI). \tag{5}$$

Equations (6), (7), (8) and (9) estimate the moderating relationship between physical environment quality and service quality, outcome quality and service quality, network quality and service quality, and lending quality and service quality using corporate image as a moderator, respectively:

$$SQ = PEQ + CI + (PEQ \text{ x } CI), \tag{6}$$

$$SQ = OQ + CI + (OQ \text{ x } CI), \tag{7}$$

$$SQ = NWQ + CI + (NWQ \text{ x } CI), \tag{8}$$

$$SQ = LQ + CI + (LQ \text{ x } CI), \tag{9}$$

4. Empirical analysis

A profile of the sample respondents is presented in Table 1. The demographic characteristics of all respondents were established as follows. The sample respondents are comprised of 43% males and 57% females. The age groups of the respondents are: 26-35 years old (21.6%), 36-45 (24%) years old, and 46-55 (22.3%) years old. In terms of the respondents' ethnicity background, New Zealand European are the largest group (61.4%) followed by Asian (15.3%) and Europeans (12.4%). Pacific Islander accounted for the smallest group with only 2.2% in total. The result showed 38.6% of the respondents have a diploma or certification, followed by 30.3% who are high school graduates, and 21.1% with bachelor degrees. The

dominant occupation group is professional (29.6%), followed by self-employed (14.8%) and civil servant (10.7%). The major annual income level of the respondents is between NZ$40,001-NZ$60,000 (27.9%), followed by NZ$30,001-NZ$40,000 (18.0%), and NZ$60,001-NZ$80,000 (17.0%).

This study uses exploratory factor analysis to identify the underlying factor structure of a relatively large set of observed variables without imposing a preconceived structure on the outcome (Child, 1990; Garson, 2006). The principal component analysis identified five service quality dimensions from the factor structure instead of the hypothesized four dimensions. The fifth service quality dimension called *lending quality*, is hypothesized to positively influence bank customers' service quality perceptions. The following relationship is hypothesized.

H_{12}: Lending quality positively affects bank customers' service quality perceptions.

Lending quality is measured by the following items: the bank offers competitive interest rates; the time taken for loan approval/disapproval is acceptable; and the loan terms and conditions are clear and adequate.

The items used to measure each construct were tested for reliability using a Cronbach's Alpha value of 0.60 as the cut-off point (see Table 2 and 3 in Appendix). A value of 0.60 or more indicates satisfactory internal consistency reliability in exploratory studies (Hair, Bush and Ortinau, 2000). The scores of the items (questions) representing each construct were totalled, and a mean score was calculated for each construct. Using these means, together with the demographic characteristics, the multiple regression analysis was conducted. Table 4 presents the results of the five identified dimensions regressed against service quality (equation 2); and Table 5 presents the results of service quality, corporate image, value and demographic variables regressed against customer satisfaction (equation 1).

The F statistic is significant at the 1% level of significance and the adjusted R^2 indicates the model fits well. The adjusted R^2 revealed that 54.1% of the variance in service quality was explained by the regression model. Table 4 shows the coefficients interaction quality, outcome quality, and network quality are positive and significant at 1% level, while physical environment quality dimension is significant at the 5% level, and lending quality is significant at 10% level of significance. Thus hypotheses H_1, H_2, H_3, H_4, and H_{12} were statistically supported. The results show that interaction quality ($\beta = 0.539$) has the most influential effect on service quality compared to the other four primary dimensions. Network quality ($\beta = 0.155$) is the second most influential dimension of service quality, followed by outcome quality ($\beta = 0.121$) and physical environment quality ($\beta = 0.106$). Lending quality ($\beta = 0.094$) has the least effect on bank customers' overall service quality perceptions compared to the other primary dimensions.

Table 5. Regression analysis (equation 1)

Dependent variable = Customer satisfaction $R^2 = 0.749$ Adjusted $R^2 = 0.740$ Std. error of estimate = 0.633 F = 80.981***				
	Coefficients	Std. errors	t	Sig.
(Constant)	-.359	.281	-1.275	.203
SQ	.462	.047	9.863	.000***
VLE	.279	.043	6.500	.000***
CI	.334	.047	7.130	.000***
Gender	.016	.067	.240	.811
Ethnicity1 (European)	.018	.079	-.230	.818
Occupation3 (Student)	.075	.095	.794	.428
High Income ($80K+)	.235	.121	1.940	.053*
High Education (Bachelor +)	.128	.214	.599	.550
Old Age (56 years+)	.239	.102	2.348	.019***
Middle Age (36-55years)	.081	.089	.907	.365
Middle Education (Diploma)	.128	.207	.617	.538
Middle Income ($40K-$80K)	.151	.077	1.969	.050**
Occupation2 (Self-Employed)	.279	.143	1.948	.052*
Ethnicity2 (Asian)	-0.69	.117	-.593	.554

Notes: *** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level.

Table 5 presents the estimation results using several combinations of the independent variables as shown in equation (1). The table shows service quality, value (price), corporate image, high income, middle income, old age and self employed are positive and statistically significant at the 1%, 5% and 10% level,

Table 4. Regression analysis (equation 2)

Dependent variable = Service quality $R^2 = 0.547$ Adjusted $R^2 = 0.541$ Std. error of estimates = 0.773 F = 98.078***				
	Coefficients	Std. errors	t	Sig.
(Constant)	-0.075	0.259	-0.289	0.773
Interaction quality	0.539	0.062	8.715	0.000***
Physical environment quality	0.106	0.053	1.991	0.047**
Outcome quality	0.121	0.043	2.827	0.005***
Network quality	0.155	0.043	3.584	0.000***
Lending quality	0.094	0.050	1.886	0.060*

Notes: *** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level.

respectively. For example, the result shows that value (price) has a positive effect on customer satisfaction. This result confirms Varki and Colgate's (2001) findings that value (price) perceptions have a significant direct effect on customers' satisfaction in the banking industry. This finding also supports the view that perceived value is an important factor that relates to bank performance and customer satisfaction (Matzler et al., 2006). Similarly, customer satisfaction is positively influenced by corporate image. The results support the findings of Mihelis et al. (1999) that a favorable bank image leads to bank customers' satisfaction. Furthermore, service quality has the strongest positive effect on bank customer satisfaction. This result supports Lassar et al.'s (2000) findings that the service quality offered by banks positively affects the level of bank customers' satisfaction. The results are also consistent with Jamal and Nasser's (2002) findings that service quality is a causal antecedent of customer satisfaction. Gan et al.'s (2006) study reveals that level of customers' satisfaction is closely connected to perceived value and corporate image. The authors' results also support the view that there is a positive relationship between customer satisfaction, perceived value, and customer behavioral intentions.

Galloway and Blanchard (1996) suggest that demographic categories are important to banks because of their potential interference between actions taken to target particular market segments and the satisfaction of existing customers. The results in Table 6 are consistent with the findings of Yavas et al. (2004) and Galloway and Blanchard (1996), whose studies demonstrate that lifestyle and demographic characteristics are important indicators regarding the acceptance of products/services in the retail banking industry. People with different social demographic characteristics may have different perceptions of value, corporate image, service quality, and customer satisfaction (Skogland & Siguaw, 2004; Clemes, Ozanne & Laurensen, 2001; Snepenger & Milner, 1990).

The demographic variables (age, income, and occupation) were also significant in explaining customers' satisfaction in the New Zealand banking sector. For example, the coefficient of old age is positive and significant at the 10% level of significance for the age group of 56 years old and above, which suggests that older customers are more satisfied with their bank services. The results also show that the respondents who are self-employed and have an income level of $40,001 and above are satisfied with their bank services.

The coefficients of *Gender*, *Ethnicity*1, *Ethnicity*5, *Occupation*2, *High Education*, *Middle Education* and *Middle Age* have no significance in explaining bank customers' satisfaction in the New Zealand banking sector but they have the correct priori hypothesized signs. For example, the negative coefficient of *Ethnicity*2 showed that Asian customers were less likely to be satisfied with their bank services. Most Asian customers in New Zealand are immigrants, and are more risk adverse and prefer a personal banking relationship compared to online banking promoted among banks in New Zealand.

Table 6A to 6F shows the moderating relationship between service quality and customer satisfaction using value (price) as a moderator and the moderating relationship between interaction quality physical environment quality, outcome quality, network quality and lending quality with service quality using corporate image as a moderator, respectively. For example perceived value moderates the relationship between service quality and customer satisfaction. This result implies that the effect of service quality on customer satisfaction becomes stronger when the effects of the moderator, value, is added into the model. Caruana et al. (2000) note that the impact of service quality on customer satisfaction is not only direct as the relationship is also moderated by perceived value.

Similarly, Table 6B-6F shows that corporate image played a positive and significant role as a moderator between each of the service quality dimensions (interaction, physical environment, outcome, network and lending quality) and service quality in the context of New Zealand's banking sector. This result is consistent with the results from previous research. For example, Gronroos (1984) states that "a customer's positive image of the restaurant makes him find excuses for his negative experiences... a negative image may easily increase perceived problems with service quality" (Gronroos, 1984., p. 39). Lu (2009) also proves that corporate image has a significant moderating effect on the impacts of outcome and environment quality. The study's results show that when a consumer's interaction, physical environment, outcome, network, or lending quality perceptions are negative, a positive corporate image may help mitigate the negative effects on interaction, physical environment, outcome, network, or lending quality on perceived service quality.

Discussions and conclusions

The results show the five primary service quality dimensions (interaction quality, physical environment quality, outcome quality, network quality, and lending quality) positively affect overall bank service quality (see Table 4).

The results also show that service quality, value (price), and corporate image positively influence bank customers' satisfaction. Table 5 shows service quality is the most important determinant of customer satisfaction. The finding is consistent with Anderson and Sullivan (1993) study on bank

customers' in Sweden. The authors found the level of customer satisfaction increased with the level of perceived service quality. Similarly, Yavas et al. (1997) studied bank customers in Turkey and concluded that bank service quality lead to customers' satisfaction. The authors' conclusion was shared by Spreng and Mackoy (1996) who illustrated that service quality perceptions were major determinants of customer satisfaction and that service quality leads to satisfaction. Colgate (1999) suggests increased levels of customer satisfaction are positively linked to the firm's return. The satisfied customers will likely recommend their banks to their friends and relatives.

Corporate image also has a direct impact on bank customer's satisfaction. Bank customers are more satisfied when they perceive that their bank has strong brand image (Naser et al., 1999; Chen et al., 2005). Value (price) is perceived to have a small impact on bank customers' satisfaction, but it should not be neglected since value plays a role in enhancing the level of customer satisfaction in the retail banking industry (see Matzler, Wurtele, and Renzl, 2006; Varki and Colgate, 2001). The result of this current study is consistent with Varki and Colgate's (2001) findings that value has a direct effect on bank customers' satisfaction.

This study also investigates the moderating effect of value (price) on the relationship between service quality and customer satisfaction. The regression results reveal that value (price) has a moderating effect on the relationship between service quality and customer satisfaction (see Table 6A). The result of this study concurs with Caruana et al's (2000) finding that perceived value (price) moderates the relationships between service quality and customer satisfaction in the context of the New Zealand banking industry. The result implies that customers may not be entirely satisfied with a bank's services, but they may still be satisfied due to competitive price (value) provided by the bank. The finding of this study provide bank managers with a better understanding of the relationship between service value, service quality and customer satisfaction. This information may help bank management to form better pricing strategies to manage the trade-off between value (price) and service quality to deliver the best possible service quality and value to achieve maximum customer satisfaction.

Another managerial implication is that while the management strives to improve service quality, there is a cost to their customers. In the end, customers may still be dissatisfied if they believe they overpaid for the services. Maintaining a balance between good banking service quality and price is a strategic option that will help banks compete better in a competitive environment.

Similarly, the results also reveal that corporate image has a moderating impact on the relationship between service quality and the primary dimensions of service quality (see Table 6B-6F). Good experiences of interaction quality, physical environment quality, outcome quality, network quality, and/or lending quality are enhanced when banks have a good corporate image, and therefore, so are the perceptions of service quality.

Lu et al. (2009) recognize that customers may be more forgiving when they receive poor services if they have a good image towards their service providers. Therefore, even if the customers occasionally receive poor services from their current bank, their overall service quality evaluations may still remain positive due to the perceptions of a good corporate image among the customers. Gronroos (2000) maintains that image acts as a filter influencing the perceptions of customers and that the technical and functional dimensions of service quality are seen through this filter. In this current study, the original two dimensions (technical and functional) have been re-defined as five primary dimensions of service quality. Bank customers may experience minor problems with one or more of the five dimensions, however, if the image of the bank is favorable the problems may be overlooked due to the sheltering effect of a favorable bank image. Alternatively, a poor bank image magnifies any problems and customers may become more dissatisfied even when they encounter inconsequential problems. Gronroos (2000) also explains that sometimes a good image lessens more serious problems in the short term but this effect diminishes rapidly and the image of the organization changes. This may be particularly important for banks as those that are seen as more stable and trustworthy cannot afford to make minor or major mistakes with any of the five dimensions of service quality on a continuous basis. If they do so, they risk a decline in their image with the negative effect on service quality, and subsequently, bank customer satisfaction.

The empirical results also show that income, age and occupation have an impact on bank customers' satisfaction. In order to improve customer satisfaction, bank management should develop strategies and products to cater for different customers from different socioeconomic backgrounds. For example, older age, high income and civil servant consumers tend to have greater expectations of service and they are also more well-informed. In addition, when the age group of the customers increases, the customers will have higher propensity to stay with their banks. This result has implications for staff training and servicing support to improve older consumers' positive experiences while interacting with the bank.

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Appendix

Table 1. Profile of the respondents

Variables		Total respondents	
		Frequency (No. of respondents per option)	Percentage
Gender	Male	177	43.0
	Female	235	57.0
	Total	412	100.0
Age	18-25	31	7.5
	26-35	89	21.6
	36-45	99	24.0
	46-55	92	22.3
	56-65	66	16.0
	66-75	25	6.1
	75+	10	2.4
	Total	412	100.0
Ethnicity	NZ European	253	61.4
	NZ Maori	23	5.6
	Pacific Islander	9	2.2
	European	51	12.4
	Asian	63	15.3
	Other	13	3.2
	Total	412	100.0
Education	Intermediate education	8	1.9
	High school	125	30.3
	Diploma/Certification	159	38.6
	Bachelors degree	87	21.1
	Postgraduate degree	28	6.8
	Other	5	1.2
	Total	412	100.0

Table 1 (cont.). Profile of the respondents

Variables		Total Respondents	
		Frequency (No. of respondents per option)	Percentage
Occupation	Professional	122	29.6
	Self-employed	61	14.8
	Student	26	6.3
	Civil servant	44	10.7
	Laborer	9	2.2
	Farmer	7	1.7
	Unemployed	9	2.2
	Retired	42	10.2
	Sales/service	38	9.2
	Home maker	28	6.8
	Other	26	6.3
	Total	412	100.0
Income	Up to NZ$200,000	44	10.7
	NZ$20,001-NZ$30,000	30	7.3
	NZ$30,001-NZ$40,000	74	18
	NZ$40,001-NZ$60,000	115	27.9
	NZ$60,001-NZ$80,000	70	17
	NZ$80,001-NZ$100,000	35	8.5
	NZ$100,001-NZ$120,000	23	5.6
	NZ$120,000+	21	5.1
	Total	412	100

Table 2. Reliability test for service quality dimensions

Dimension	Cronbach's Alpha	Item No.	Items	Rotation Loading
Interaction quality	0.907	IQ1	Bank staff have good knowledge	0.741
		IQ2	Bank staff provide clear explanations	0.601
		IQ3	Bank staff provide clear answers to questions	0.784
		IQ4	Bank staff provide useful advice	0.767
		IQ5	Waiting time for service is acceptable	0.517
		IQ6	Bank staff act in a professional manner	0.775
		IQ7	Bank staff appearance is neat and tidy	0.716
		PEQ8	The ambient conditions in the bank are good	0.542
Physical environment quality	0.816	PEQ2	The bank has an efficient cash handling machine (ATM's)	0.619
		PEQ3	The bank provides good access for customers	0.706
		PEQ4	The bank has enough parking spaces for customers	0.738
		PEQ5	The bank has a convenient location for customers	0.686
		PEQ7	Customer feel safe and secure when in the bank	0.447
Outcome quality	0.701	OQ4	Bank statements are accurate	0.534
		OQ5	The bank informs customer about policy changes	0.681
		OQ6	The bank informs customer about new products	0.691
		OQ7	The bank insists on error free transactions and records	0.673
Network quality	0.869	NWQ1	User-friendly internet banking services	0.826
		NWQ2	24 hours access to internet banking services	0.891
		NWQ3	Internet banking is safe and secure	0.811
		NWQ4	Bank services are easy access through the phone	0.518
Lending quality	0.756	OQ1	The bank offers competitive interest rates	0.460
		OQ2	The time taken for loan approval/disapproval is acceptable	0.762
		OQ3	The loan terms and conditions are clear and adequate	0.784

Table 3. Reliability test for customer satisfaction and related constructs

Construct	Cronbach's Alpha	Item No.	Items
Service quality	0.908	OSQ1	Excellent service quality compare to other bank
		OSQ2	Pleased with service performance
		OSQ3	Provide consistently good services
Value (price)	0.894	P1	Reasonable fee charged
		P2	Good value for money
		P3	Satisfied with given charges

Table 3 (cont.). Reliability test for customer satisfaction and related constructs

Construct	Cronbach's Alpha	Item No.	Items
Corporate image	0.892	IMA1 IMA2 IMA3 IMA4	The bank has a good image in customers' minds The bank is a stable business enterprise Trustworthy compared with other banks The bank has strong credibility
Customer satisfaction	0.945	CS1 CS2 CS3 CS4 CS5	The bank satisfied my needs and wants Satisfied banking experience Happy to choose current bank compared to other banks Right decision to stay with current bank Banking experience is very satisfactory

Table 6A. Value moderating service quality and customer satisfaction

(Constant)	Coefficients	Std. errors	t	Sig.
Service quality	-0.099	0.410	-0.242	0.089
Perceived value	0.780	0.081	9.680	0.000***
Service quality × Perceived value	0.541	0.146	3.708	0.000***
Adjusted R^2 = 0.702	-0.037	0.025	-1.494	0.036**
F = 320.253***				

Table 6B. Corporate image moderating interaction quality and service quality

(Constant)	Coefficients	Std. errors	t	Sig.
Interaction quality	-0.656	0.617	-1.062	0.289
Corporate image	0.584	0.127	4.584	0.000***
Interaction quality × Corporate image	0.704	0.128	5.504	0.000***
Adjusted R^2 = 0.629	-0.032	0.023	-1.368	0.024***
F = 231.791***				

Table 6C. Corporate image moderating physical environment quality and service quality

(Constant)	Coefficients	Std. errors	t	Sig.
Physical environment quality	-0.168	0.674	-0.249	0.803
Corporate image	0.365	0.142	2.570	0.011***
Physical environment quality × Corporate image	0.843	0.135	6.248	0.000***
Adjusted R^2 = 0.582	-0.033	0.026	-1.255	0.022***
F = 188.790***				

Table 6D. Corporate image moderating outcome quality and service quality

Constant)	Coefficients	Std. errors	t	Sig.
Interaction quality	-0.656	0.617	-1.062	0.289
Corporate image	0.584	0.127	4.584	0.000***
Interaction quality × Corporate image	0.704	0.128	5.504	0.000***
Adjusted R^2 = 0.629	-0.032	0.023	-1.368	0.024***
F = 231.791***				

Table 6E. Corporate image moderating network quality and service quality

(Constant)	Coefficients	Std. errors	t	Sig.
Network quality	0.066	0.559	0.118	0.906
Corporate image	0.277	0.116	2.400	0.017***
Network quality × Corporate image	0.859	0.112	7.636	0.000***
Adjusted R^2 = 0.571	-0.128	0.021	-1.328	0.033***
F = 180.220***				

Table 6F. Corporate image moderating lending quality and service quality

(Constant)	Coefficients	Std. errors	t	Sig.
Lending quality	0.836	0.733	1.141	0.255
Corporate image	0.125	0.178	0.702	0.000***
Lending quality × Corporate image	0.728	0.132	5.513	0.000***
Adjusted R^2 = 0.570	0.010	0.030	0.017	0.089*
F = 178.352***				

Notes: *** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level.