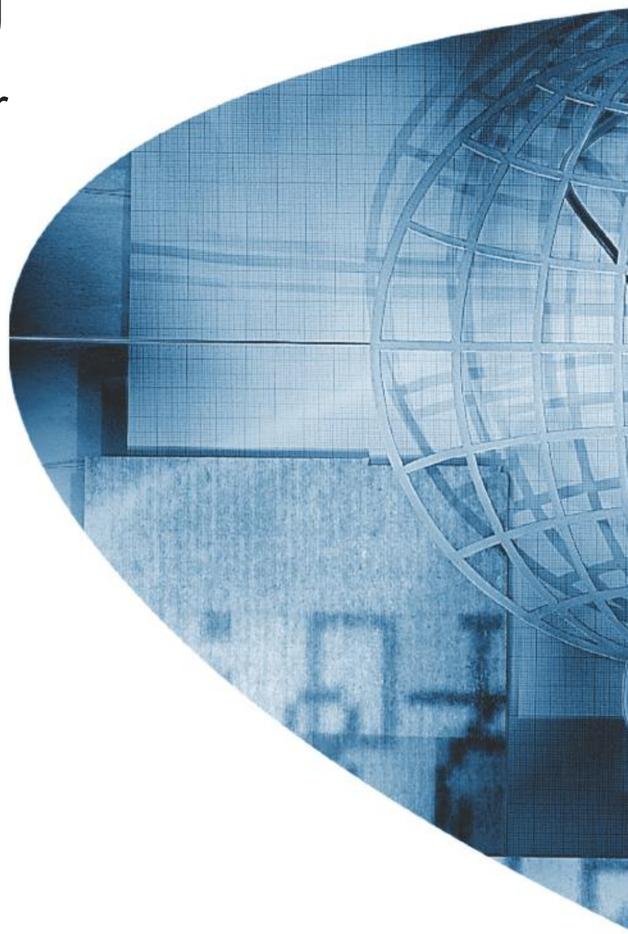
ISSN 0265-2323
Volume **29** Numbers **2** and **3** 2011

International Journal of Bank Marketing

For the financial services sector



No 2 is a special issue: Consumer confidence in financial services after the crunch: new theories and insights

Guest Editor: Sally McKechnie

www.emeraldinsight.com

Emerald

International Journal of

Bank Marketing

For the financial services sector

ISSN 0265-2323

Volume 29
Number 2
2011

Consumer confidence in financial services after the crunch: new theories and insights

Guest Editor
Sally McKechnie

CONTENTS

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
p. 87

0265-2323

Guest editorial

About the Guest Editor *Sally McKechnie is an Associate Professor in Marketing at Nottingham University Business School, Nottingham, UK.*

Consumer confidence in financial services after the crunch: new theories and insights

The unprecedented turbulence and uncertainty experienced in global economic and financial markets because of the "credit crunch" has had a damaging impact on consumer confidence. For the financial services industry in particular the impact of the current crisis on consumer saving and spending activities is confusing. The goal of this special issue is to bring together research that is theoretically innovative and well grounded to enrich our understanding of the consequences of the financial crisis for the consumption of retail financial services. There are four research papers and two viewpoint papers, which individually and collectively provide timely insights into this area.

The opening paper "New insights into consumer confidence in financial services" by Adèle Gritten examines the extent to which consumer behaviour for financial services has changed in the UK since the credit crunch. Drawing from proprietary consumer tracking research undertaken by YouGov plc, a leading professional research and consulting organisation, this viewpoint paper provides strong empirical evidence on how exactly consumer attitudes and spending behaviours have altered. She explores hopes and fears with regard to financial decision making in households, and raises a number of interesting questions about whether we can expect to see further changes in consumer behaviour in a post-recessionary climate.

Ever since the publication of the OECD's (2005) international study of financial education and the need to improve consumer financial literacy, there has been a drive by many governments and organisations to improve levels of financial literacy and capability so that consumers are confident and capable of managing their finances well. The second paper, "Measuring the financial capability of investors – a case of the customers of mutual funds in Finland" by Outi Uusitalo, Antti Pellinen, Karl Törmäkangas and Anu Raijas, focuses on the financial capability of private investors with regard to their choice of mutual funds. Mutual funds have increasingly been seen as an attractive investment alternative to traditional savings accounts. This paper examines Finnish investors' financial knowledge and understanding in order to establish how this particular aspect of financial capability is manifested in their investment decisions. The authors find differences in types of investors according to level of financial knowledge and distribution channel used.

Notwithstanding attempts to improve financial capability, financial services consumers need to be protected especially in these challenging times. The third paper, "Financial services and consumer protection after the crisis" by Folarin Akinbami reviews the literature on behavioural economics and psychology and uses it as a basis to critique the approaches to consumer protection regulation in the UK financial services industry before the global financial crisis. Given ongoing moves to reform UK financial regulation, this paper considers some substantial changes that could have potentially significant consequences for consumers.

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
pp. 88-89

0265-2323

There has been a long tradition of "multi channelling" in the financial services retail sector, which has allowed customers to choose from a range of distribution channels. The next two research papers provide insights into how technological developments in the delivery of financial services is changing the consumption process for retail customers. The fourth paper, "Understanding the consumption process through in-branch and e-mortgage service channels: a first-time buyer perspective" by Jane Coughlan, Robert Macredie and Nayna Patel, specifically investigates the consumption process for mortgages amongst first time buyers in the UK. It sets out to establish whether this process differs between traditional in-branch and web-based service channels, and how any differences may relate to problems encountered in the electronic service environment with regard to the information search and evaluation stages of the consumer decision making process. Their exploratory study reveals that the design of electronic service environments to support these complex products is product – rather than consumer-orientated, and consequently does not help to create confidence in the online information and advice provided. The fifth paper, "Generic technology-based service quality dimensions in banking: impact on customer satisfaction and loyalty" by Shirshendu Ganguli and Sanjit Kumar Roy, makes a different contribution to extant work on technology-based service channels. Rather than examine customer perceptions of service quality in relation to specific technology-based service channels, the authors consider how these perceptions relate to technology-based banking channels generally. Through an online survey of US consumers they identify four generic service quality dimensions and establish their relative influence on customer satisfaction and loyalty. As with the previous paper, these findings highlight the need for service providers such as banks to design these distribution channels more from a customer perspective as this should help them to instil consumer confidence in accepting them.

The sixth paper, "Banking without the banks" by Steve Worthington and Peter Welch, assesses the prospects for "non-banks" to enter and expand into the UK financial services retail sector in the aftermath of the financial crisis when the reputation of "traditional" banks has been considerably damaged. This viewpoint paper is based on a cutting edge report by the authors that concentrates on challenges that these new entrants pose for banks today. They critically evaluate the cases of Virgin Money and Tesco Bank, both of which operated as niche players in the UK marketplace for more than a decade before the crisis, yet have recently announced plans to become full-service retail banks.

Finally, I would like to thank several people who have helped to bring this special issue to fruition. First of all, I would like to thank the editor of the *International Journal of Bank Marketing*, Professor Jillian Farquhar, and the publishing team at Emerald for their support throughout this project. Secondly, special thanks to all of the authors who submitted papers to the special issue, as well as to the expert reviewers for their rigorous and prompt feedback. I hope that the insights into the contemporary consumption of retail financial services provided by this collection of papers will inspire academics and practitioners to undertake further research in this area.

Sally McKechnie

Reference

OECD (2005), *Improving Financial Literacy: Analysis of Issues and Policies*, OECD Publishing, Paris.

VIEWPOINT

New insights into consumer confidence in financial services

Adèle Gritten
YouGov plc, London, UK

Abstract

Purpose – A paradigm shift in consumer confidence has taken place with the worst recession on record forcing people to evaluate their personal and household finances. This paper seeks to explore the extent to which consumer confidence has been tarnished, and how it has evolved post-recession. It aims to take both retrospective and prospective views on what has changed in the British psyche since the credit crunch, looking at where new confidences have been found and where old confidences have been lost, and hypothesising about the extent to which consumer behaviour will remain constant or further change against a likely backdrop of continuing financial instability.

Design/methodology/approach – This paper is based on a variety of proprietary quantitative research surveys conducted by YouGov plc.

Findings – This paper provides new insights into consumer confidence, including, but not limited to: demonstrating the harsh realities of more people being in financial difficulty now than 18 months ago, and its impact on confidence; looking at which aspects of household expenditure and budgets have been hardest squeezed, and what that means for short- and medium-term futures; analysing the extent to which the generally lower level of available credit makes consumers more or less reliant on borrowing as a way of life, and the associated impact on confidence and decision making/financial planning prioritisation; exploring the real fears and concerns people have about their future finances; and exploring consumer financial hopes and aspirations in a post-recessionary climate.

Originality/value – Findings from bespoke research offer hitherto unpublished and statistically valid results on the extent to which consumers have coped with and embraced the aftermath of the recession, and, moreover, how that might manifest itself in terms of future consumer confidence in financial services.

Keywords Consumers, Recession, Personal finance, Debts

Paper type Viewpoint

Introduction

A paradigm shift in consumer confidence has taken place on a global scale. The worst recession on record has forced everyone, whether rich or poor, young or old, to evaluate their personal and household finances, and to think about the implications for future generations to come. From the hedonist heights of a UK society that had been predicated almost exclusively on debt and credit for nearly a decade and the tacit assumption that growth was always inevitable, consumers have all come back down to earth with a bump over the last eighteen months, some immediately, others in a more protracted manner.

This paper explores the extent to which such consumer confidence in the UK has been tarnished, and how it has evolved since the onset of the recession. The paper takes both retrospective and prospective views on what has changed in the British psyche during the recession. It looks at where new confidences have been found, and where old confidences have been lost. It hypothesises about the future and the extent to which,

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
pp. 90-106

0265-2323
DOI 10.1108/02652321111107602

against a backdrop of ever more likely financial instability, consumer confidence will return to stability, remain at its current level, or increase.

The paper also explores the paradoxes and tensions requiring resolution in consumer's minds *vis-à-vis* their financial choices. The financial services industry urges people to make ever more certain and medium- to long-term decisions about products (savings, investments, pensions, mortgages etc), but these are being made in an ever more uncertain and unstable world. The manifestation of the clash between psychological/social worrying and financial planning often results in consumer resentment, frustration, inertia and irrational behaviours in terms of choices and decision making concerning financial issues and their implications for lifestyle choices.

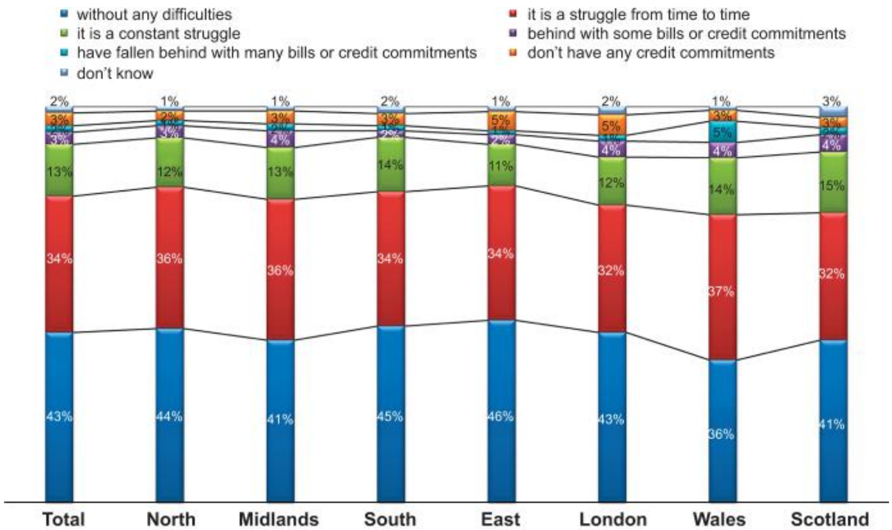
All data for this paper are the result of primary, proprietary tracking research undertaken by YouGov, the largest proportion of which has been derived from YouGov's DebtTracker survey, a quarterly online survey of a nationally representative sample of 2,000 UK adults, as well as an additional 1,000 sample of respondents who are in "financial distress" (people who claim to be falling behind with debt or credit repayment terms). DebtTracker has been running since July 2008, tracking, pre-, during, and post-recession response measures on a range of financial metrics pertaining to individual and household finances.

Other data sources mentioned include the UK/Markit HFI (Household Finance Index) – a monthly online survey of 2,000 adults representative of UK household incomes exploring optimism about spending patterns within UK households. There are also minor references to YouGov's prosperity index, a proprietary index derived from a number of survey questions, all pertaining to household finances and people's perceived confidence *vis-à-vis* what is happening in the wider economy. Incidental reference is also made to some questions asked on an *ad hoc* basis on YouGov's Omnibus surveys.

The current state of play of household finances

It would seem appropriate to start by taking a look at UK household finances. Firstly, in terms of the extent to which individuals are keeping up with bills or credit repayments, Wales (37 percent), followed by Scotland (32 percent), fares the worst in terms of people still "finding it a struggle from time to time", according to YouGov's latest (June 2010) DebtTracker findings. London is the region least affected, with four in ten Londoners saying that they are currently keeping up with repayment obligations without any difficulty (see Figure 1).

However, the number of people claiming that they are "sometimes" or "more often than not" short of money and struggle to last until payday decreased rather markedly between February and June 2010. Consistently, between July 2008 and July 2009, 53 per cent of the UK population claimed to be struggling somewhat until payday. That figure peaked at 56 per cent in November 2009, but decreased to our lowest yet reported figure of 43 per cent in June 2010. In other words, householders are seemingly finding themselves on the road to recovery, with household finances in a better state now than they have been for over 2 years. This also coincides with the largest proportion of people saying that they "never struggle until payday" (31 per cent) in June 2010, in comparison with an average of 26 per cent for all DebtTracker waves prior to this year. Of those living in the South of England six in ten "hardly ever" or "never" struggle until payday according to our latest figures, whereas in Wales that corresponding



Note: Base: June 10: 3097

Figure 1.
Current economic situation – keeping up with bills and commitments by region

figure is four in ten: in other words, the further away from London and the more rural the area, the harder the struggle! It is also people living in Wales and Scotland who claim to be likely to borrow more in the next six months, whilst people in the South and Southeast of England are least likely to borrow more in the next six months.

Overall, however, when asking the population to comment more generally about their financial circumstances over the past six months, people do appear to be coping much better in 2010, with a small decrease on the 2009 figures of respondents saying "things have got a bit worse" or "much worse" for them financially. Correspondingly, there has been a similar, small (1 per cent) increase in respondents saying "things are better". When comparing people's present financial position with their position 12 months ago, it is the North and the East of England that think that their already distressed financial position has "remained the same" or "got worse" over the last 12 months compared to other regions. The North-South divide is thus very much still at play.

The "financially distressed" segments of society are also struggling more than ever before when it comes to repaying "other debts". In July 2008, only 13 per cent of those behind with bills for more than 3 months were behind with "other debt" commitments. That figure has risen steadily since then, peaking at 31 per cent in February 2010 amongst this distressed sample, showing how the real challenges of recession are hitting the already vulnerable the hardest. It also shows that trying to keep up with crucial living costs, e.g. utility bills, phone bills, council tax and rents etc., is to the detriment of clearing "other debts" such as store cards, credit cards and unsecured lending.

Daily spend

When considering household spend, fewer people are now falling behind with utility bill and council tax repayments than in the run up to and during the recession.

However, in order to cope with mandatory payments, cutbacks are evident across the board elsewhere, with consumers cutting back on almost everything including "nice to have" items, food and clothes. Many are also foregoing holidays.

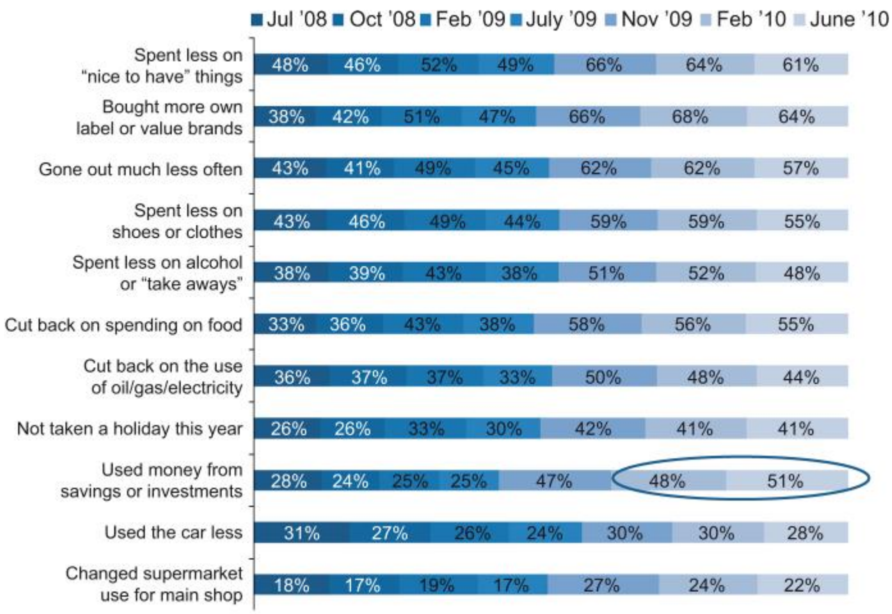
People are also seeking out the "own label" brands (the most marked shift in Figures 2 and 3) and are going out much less often and cutting back on alcohol. Also, five in ten are cutting back on food, suggesting that a new stoicism is emerging out of the detritus of the previous decade of decadence. This is particularly so for the financially distressed segment of society.

More positively, a larger proportion of people now expect to spend more on high-ticket items or purchases for their homes, such as carpets, curtains, furniture, double glazing, cookers, fridges, washing machines, televisions, computers and DVD recorders etc., than last seen in Autumn 2008.

Neither a lender nor a borrower be

Consumer borrowing levels over the last couple of years have either stayed the same or gone down across all retail borrowing categories, with the exception of the credit card category, where we have seen a slight increase in borrowing.

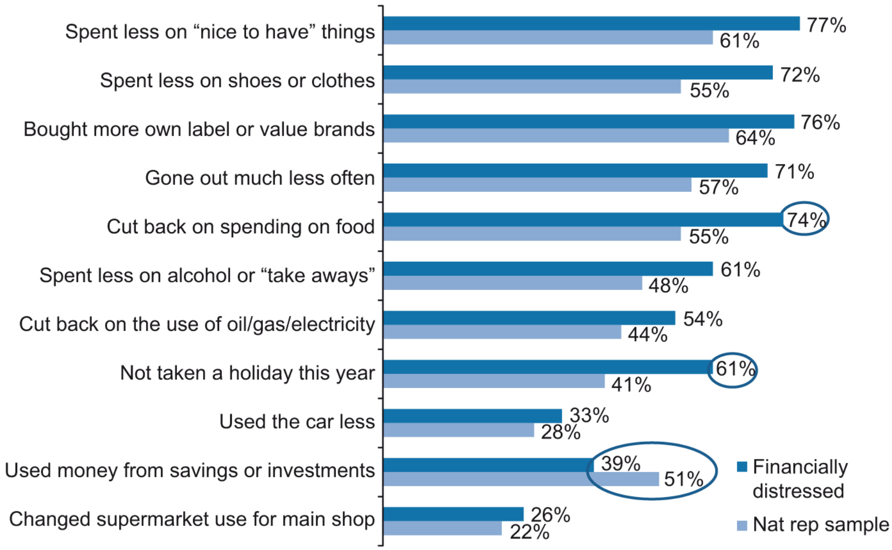
Those in financial difficulty are still turning to unsecured personal loans as a means of obtaining credit. In fact, the figures amongst those in distress who turn to unsecured lending are markedly on the up.



Q: Which of the following things, if any, have you [or your partner] had to do over the past 6 months in order to help make ends meet?

Note: Base: July '08: 3329; Oct '08: 3353; Feb '09: 3804; July '09: 3647; Nov '09: 1036; Feb '10: 936; June '10: 2792

Figure 2.
Spending trends over time



Q: Which of the following things, if any, have you [or your partner] had to do over the past 6 months in order to help make ends meet?

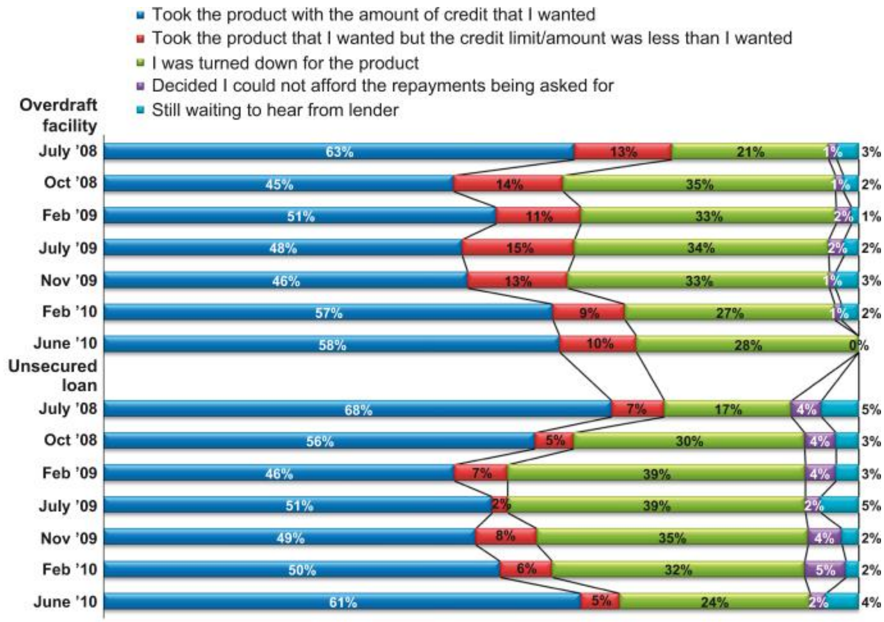
Note: Base: All in financial difficulty June 2792

Figure 3. Spending trends – differences by sample

We have also seen a significant increase is people obtaining loans from family, mail order catalogues and the Department for Work and Pension's Social Fund. We can hypothesise that a range of factors are at play here, including: consumers no longer being able to use credit cards as a payment mechanism because they have already maximised their existing limits, and/or have been denied additional credit limits with their current and/or other credit card providers. Consumers have also been refused additional borrowing on secured credit, either because of existing debt burdens and/or lack of loan availability. The "credit crunch" is thus still very much a reality, even though the UK might technically be out of recession for the time being.

That said, creditors are showing some small respite in lending criteria, and this might be another reason why many people are now claiming to be coming out of financial difficulty. Of those who have taken out an overdraft facility or loan, it would seem that more people are now able to take a product with the amount of credit requested than at any other point since July 2008. Fewer people, however, are now able to take out the amounts requested via unsecured loans than during pre-recession levels (see Figure 4).

Overall, a telling indicator about the psyche of consumers in the country – "UK plc" – is their agreement with the statement "Borrowing has become a way of life". In July and October of 2008, when most people were still largely oblivious to the impending economic meltdown in the UK and elsewhere, over 60 per cent of people agreed with the above statement. By June 2010, this figure had dropped dramatically to a 35 per cent level of agreement, indicating strongly that borrowing had quickly gone out of fashion. Very much in line with the reality shock that hit consumers around Christmas



Note: Base: June 10: Overdraft facility 69, Unsecured loan 49

Figure 4.
Results of credit applications

2008, people started to realise that the unprecedented and excessive borrowing of the early 2000s was unsustainable. In short, there was a paradigmatic and substantial shift in the UK psyche towards the end of 2008. A decade of hedonism and financial irresponsibility had been exposed. It was time for each individual and each household to evaluate, face up to the truths and re-prioritise their finances, starting immediately with tackling the debt burden that is still a chain around many people's necks. Accordingly, there has been a decrease in the number of people who use their overdraft facility, as well as a decrease in the number of people who are usually overdrawn by the time they get paid according to our latest DebtTracker survey data (June 2010).

It is striking that this trend is further corroborated via agreement to the questionnaire statement, "companies lending money have only themselves to blame if people stop repaying" 57 per cent agreed with this statement when we first asked it in July 2008. This figure has been in steady decline with our latest figures (June 2010) showing only 47 per cent net agreement. The majority of consumers have awoken to the reality of the need for a renewed onus on individual financial responsibility, which arguably had been pretty much lost for a decade or so.

There has also been an increase in the number of people seeking debt advice since November 2009. Amongst the financially distressed sample of those in financial difficulty, the most preferred method of obtaining debt advice is face-to-face (42 per cent), followed by phone (36 per cent), and websites (17 per cent). The low latter figure compared to overall internet usage and penetration figures might, in part, be due to the access (or lack thereof) to technology amongst a financially distressed sample. Technological and general literacy issues might also be at play.

Positively, the number of bankruptcies and individual voluntary agreements (IVAs) has remained consistent over the past 6 months, but there was a 1 per cent increase in the number of debt management plans (DMPs) between November 2009 and February 2010. By our calculation, this means that there are now approximately 787,500 people in the UK with a DMP.

Hypothetical increases in spend

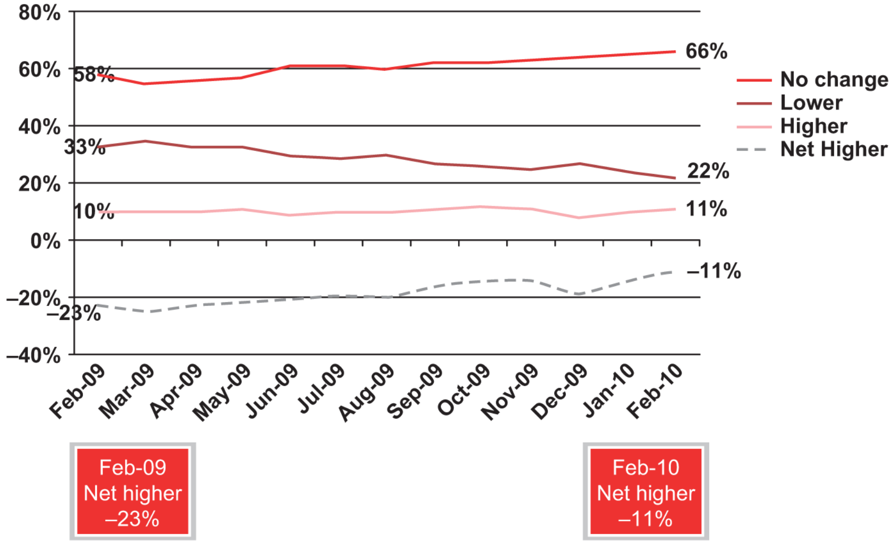
Thus said, when asking consumers about a hypothetical increase in their utility bills overall, only four in ten people could cope with such rises. Those already in financial difficulty say that they could not cope at all. Similarly, when asked about a hypothetical 20 per cent increase in council tax, only four in ten could cope without any difficulty, while those already in financial difficulty could not cope at all. Part-time workers are also the segment most likely to suffer in relation to any additional increases to the cost of living.

Overall, YouGov's multiple data strands all point towards a extraordinarily disturbing picture regarding the lack of adequate savings amongst UK householders. Our latest DebtTracker data (June 2010) shows that 1 in 5 people have less than £500 in liquid savings, with a further five in ten of the population having less than £10,000 that is easily accessible. That is a staggering seven in ten people who are less than a few paydays away from personal financial disaster. This figure does not factor in a debt-to-savings ratio, i.e. it is possible that amongst the 70 per cent of the population with what might be termed moderate levels of savings, there will be a proportion of whom who have greater levels of personal debt (excluding mortgages) than their levels of saving per se. Initiatives such as the FSA's "Moneymadeclear™" or NS&I's "You and Your Money" are all welcome additions to assisting consumer financial literacy. However, the fact remains that debt-to-credit ratios are staggeringly out of proportion in the UK compared to most other western European counterparts.

Data from our YouGov/Markit survey shows that net month-on-month household saving is still in negative territory, although the outlook is a little rosier than during the height of the recession and looks more positive in terms of the outlook for the next 12 months. Pensions and life assurance appear to have been most affected, with more people cutting back in these two areas than more short-term areas such as payment protection insurance (PPI), individual pension plan (IPP) or private mortgage insurance (PMI) (see Figures 5 and 6).

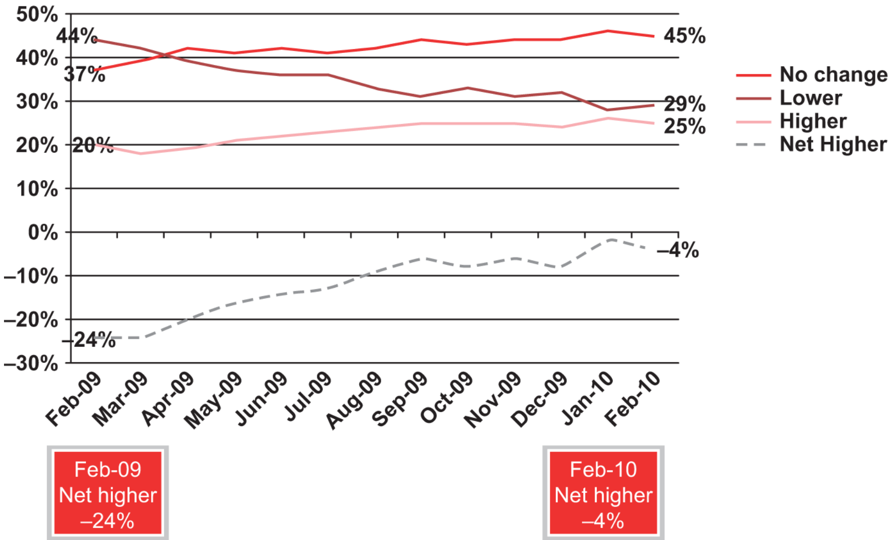
Pension woes

People are also worried about the future outlook *vis-à-vis* their personal pension. In fact, uncertainty over how to prepare for pensions is growing. Four in ten people felt that they were preparing adequately for retirement in 2009, but that figure had dropped to three in ten by 2010. There has also been an alarming increase in the number of people who simply do not know whether or not they are preparing adequately for retirement, rising from 6 percentage points to 18 percentage points in a year. Such an increase will no doubt be in part due to increasing consumer awareness about market volatility and personal experiences from having been affected or knowing people who have been affected, e.g. not receiving the yields anticipated and marketed by pension providers during the good times.



Notes: Data from YouGov/Markit: Household Finance Index. Base: c.2000 representative of UK

Figure 5.
"Compared with one month ago how has your household's level of savings changed?"



Notes: Data from YouGov/Markit: Household Finance Index. Base: c.2000 representative of UK

Figure 6.
"And how do you think your household's level of savings will have changed 12 months from now?"

Such inadequate or at least uncertain pension provision, coupled with longer-life expectancy and projected population figures of 70 million by 2020 means that a return to economic prosperity looks like it will be an insurmountable challenge for decades to come. The financial services industry should be worried that significant proportions of the population have been cutting back on contributions to protection and investment plans, and this trends looks, anecdotally, to be continuing in 2010.

The impact on stress

Interestingly, when asking people about the extent to which they feel likely to be made redundant in the next six months, it is the younger age group of 18-34s who feel that they are most likely to be made redundant, with 19 per cent saying that they are "very likely" or "likely" compared with 8 per cent of 35-54s. Overall, one in ten of the population is still fearful over his/her job for the next six months, and a further one in ten is, at best, uncertain.

Good news overall, however, is seen in data from our YouGov/Markit household finance index, which shows that job security appears to be stabilising, with net scores for job security getting better between February 2009 and February 2010 (see Figure 7).

Despite such glimmers of regained positivity, finance-related anxieties in general point towards an alarming increase in new forms and manifestations of psychological and sociological phenomena. In turn, these further affect the economy's ability to return to prosperity. For example, five in ten are losing sleep over the recession, and five in ten are being affected by depression to some degree as a result of the economic crisis. Finance-related anxieties are also affecting people's health in general and are creating relationship issues for many as Figure 8 indicates. Worryingly, these anxiety trends had been steadily on the increase since our July 2008 data, until February 2010.

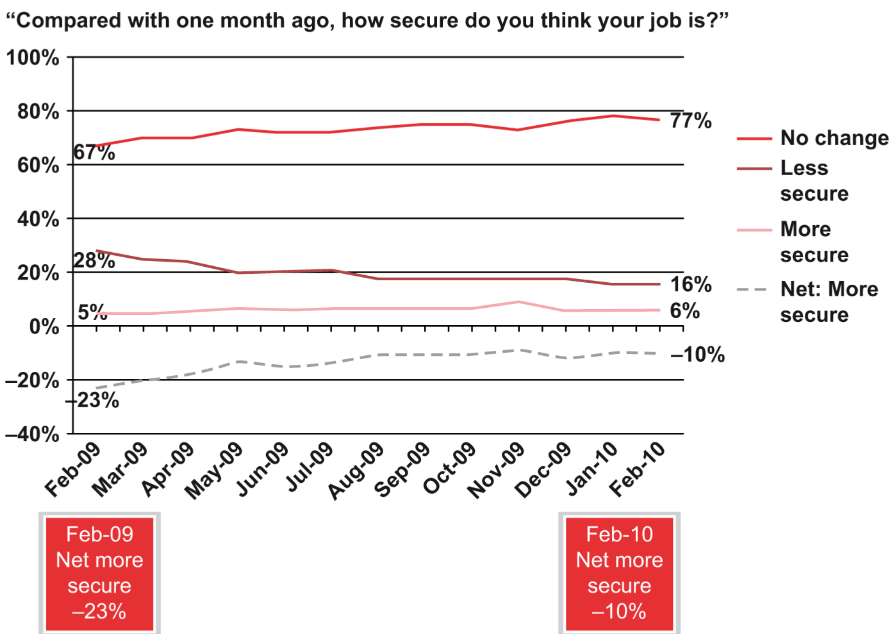
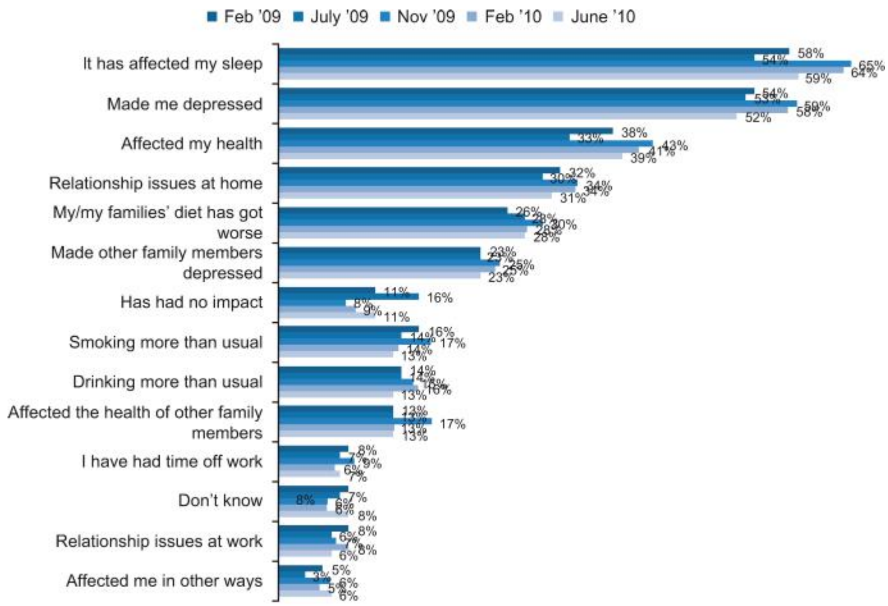


Figure 7.
Job security is stabilising

Notes: Data from YouGov/Markit: Household Finance Index. Base: c.2000 representative of UK household earnings



Q: To what extent has your struggle with bill payments impacted on your life?

Note: Base: Feb '09: 991; July '09: 803; Nov '09: 1036; Feb '10: 936; June '10: 549

Figure 8. Sociological and psychological issues as a results of financial strife

The June data set, however, shows gentle signs of pressures and burdens easing (see Figure 8).

It is likely that the NHS and private medical sectors alike will experience a whole new raft of physical and psychological ailments and physical symptoms never before witnessed in the UK. This marked bi-polar shift from "positive mental attitudes" to "negative mental attitudes", coupled with the a new consumer realism about the tough times ahead are creating a new British psyche that we do not yet know how to manage collectively and to our mutual advantage.

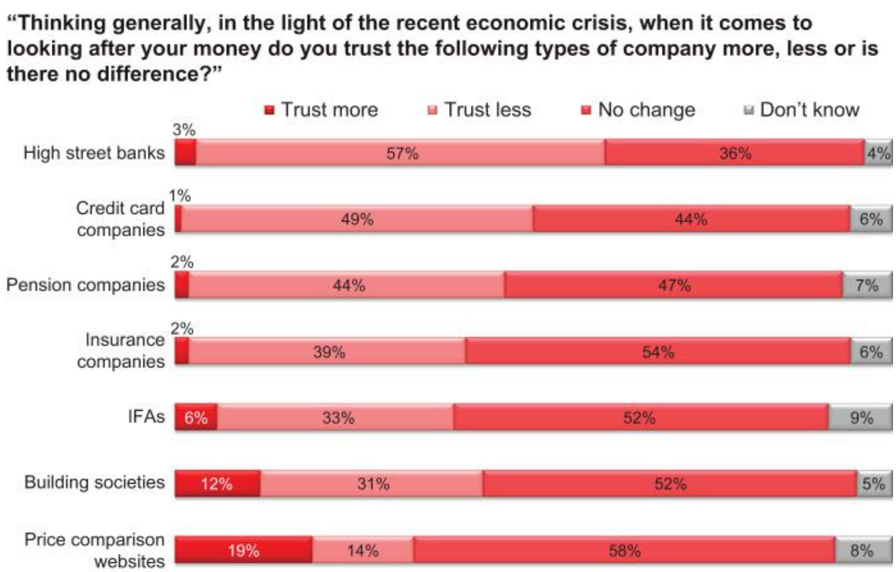
An issue of trust

With an ailing British psyche come issues of trust and cogent decision making. Consumers have had their fingers burnt in the economic meltdown. Many thought they were making sound investment decisions in property, savings and investments, pensions etc., only to discover that the value of their wealth had been, at best, inflated, and, at worst, false all along.

Many people feel let down by a system and by institutions that had promised, and often claimed to guarantee, to protect them and their assets. For those who have had the rug pulled swiftly from under their feet, it will take financial services institutions a long time to rebuild constructive dialogue and long-term, meaningful relationships with their customers again. Any form of marketing communications or advertising that ignores either explicit or implicit acknowledgment of consumer's financial plight will further alienate and disengage consumers, rather than start to pave the road to recovery and rebuild constructive dialogue with potential audiences. It is important to consumers that financial services institutions acknowledge the major part they have played in the crisis, and that they have all been culprits to varying degrees. Explicit apologies will work if they are genuine and consumers feel that lessons have been learned. Simply carrying on with marketing strategies that ignore what has happened over the past 24 months or so will come under fire.

YouGov has statistical evidence to corroborate this critique. When we posed the question: "Thinking generally, in light of the recent economic crisis, when it comes to looking after your money do you trust the following types of company more, less or is there no difference?", High street banks are trusted less by six in ten people, followed by credit card companies being trusted less by five in ten people. Four in ten trust pension and insurance companies less, whilst three in ten trust IFAs and building societies less. Interestingly, the winners look to be comparison sites with one in five trusting these more since the economic crisis (see Figure 9).

This indicates a shift, albeit a small scale one, in which consumers increasingly shape and take responsibility for their own personal finances online, rather than relying on the traditional, direct or face-to-face channels. Perhaps we should question the extent to which the industry is really ready to cope with a genuine shift in consumer pro-activity when it comes to sorting and managing their personal finances. There is also a question as to whether the industry is creating speedy and efficient enough processes for when people are on the tipping point of a product purchase online. Many financial products still require several days before a decision can be made on the success of the application, or, more often than not, require consumers to phone/visit a branch, despite having just engaged with a lengthy online application process and provided all of the requisite detail for financial services companies to be



Notes: Data from YouGov Omnibus, run February 2010. Base: 2104 nationally representative

Figure 9.
Trust issues for financial services providers

able to make the decision as to whether the applicant is a creditworthy or eligible candidate for the product in question.

Perhaps there is a paradox herein. As some banks revert to a more traditional, customer-centric service with extended branch hours/approachable and friendly staff-based propositions etc. (e.g. the new Metro bank branches in London), many younger, more financially astute customers simply want to be in charge of their own financial destinies. Rather like the advent of digital TV with pick-and-choose scheduling, i.e. non-linear rather than linear models of revenue generation, financial services companies need to learn to think about new models, products and services for the younger generation who are the wealth holders (or perhaps permanent debtors?) of tomorrow. Online is the preferred communication channel for the younger generation, yet few financial services companies appear to have cottoned on to the real and genuine power of online activity, not just as a marketing and brand building or call-to-purchase tool, but as the most efficient, transactional route for under 34s in particular. The PC/Mac is a physical extension of many young people, much like the "Club Card" fob is part of the personal identity that Tesco wants to create for its customers. I cannot think of a single financial services company that has fully maximised or harnessed the power of Online in marketing to its younger, more affluent customers in particular.

The future is bright?

Despite systemic trust issues and a rather bleak picture when it comes to the orderliness of UK household finances, there is a tacit optimism and a sense of anticipation about the future.

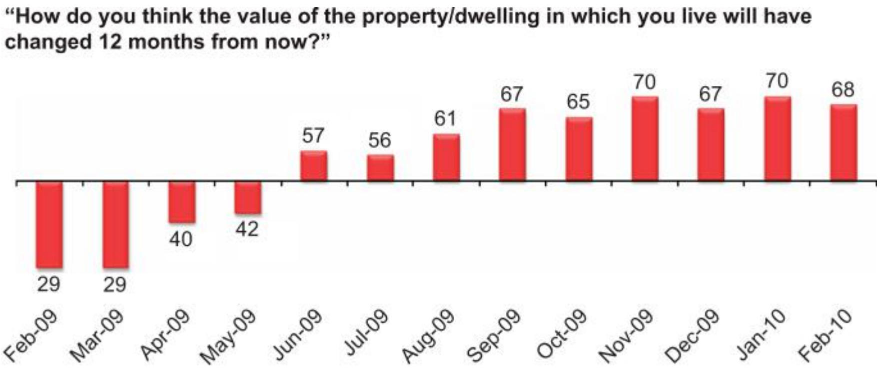
A total of 29 per cent of the UK population expect house prices to rise between 0 and 10 per cent over the next 12 months, which is a greater level of optimism than ever seen since YouGov has been asking this question on its DebtTracker survey. Most people expect house prices to recover within the next three to five years, suggesting that a medium term mindset is dominating financial behaviours.

Comparable data from our YouGov/Markit survey points to an upward trend in terms of how secure people feel about the value of their property. Positive scores have been seen on a monthly basis since June 2009, having been in negative territory for several months previously (see Figure 10).

This is further corroborated via data from our prosperity index with prosperity sentiment largely declining in line with interest rate cut announcements, but it has since stabilised, if not started to increase between March 2009 and January 2010 onwards in particular. However, there are elements of doubt creeping back in as we edge towards a period of potential political uncertainty, and as Britain's deficit continues to deteriorate, with widespread severe cuts to public sector budgets after the general election and spending review (see Figure 11).

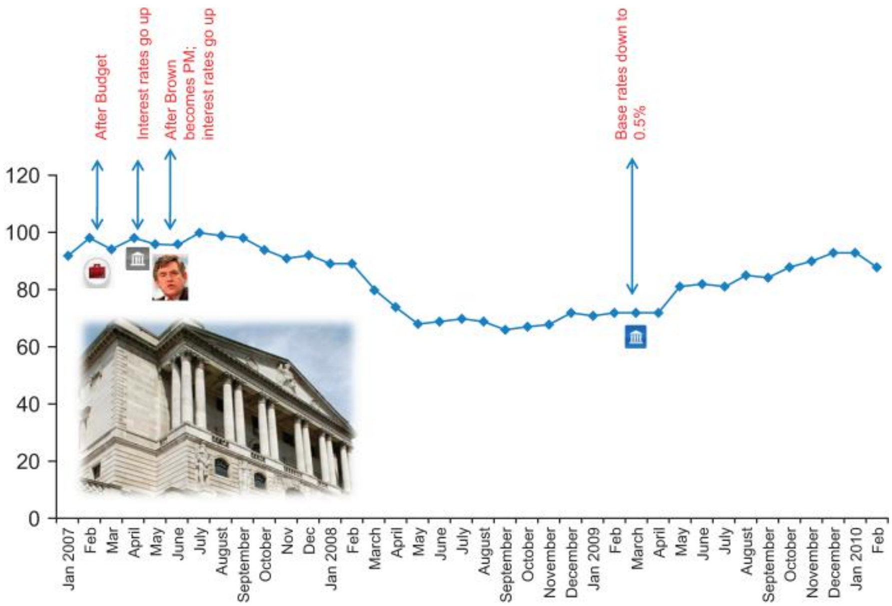
And whilst more and more people were gradually expecting their household finances to get better during the course of 2009, net consumer positivity with regards to a question from YouGov's prosperity index[1], "how do you think the financial situation of your household will change over the next 12 months", is starting to show an incremental decline again, with more people expecting the situation to get worse in 2010 versus in 2009 (see Figure 12).

The same negative disposition applies towards consumers' dissatisfaction with their family's likely standard of living over the next 12 months. Fewer people are



Notes: Data from YouGov/Markit: Household Finance Index. Base: c.2000 representative of UK

Figure 10.
Home-owners feeling more secure in the value of their property

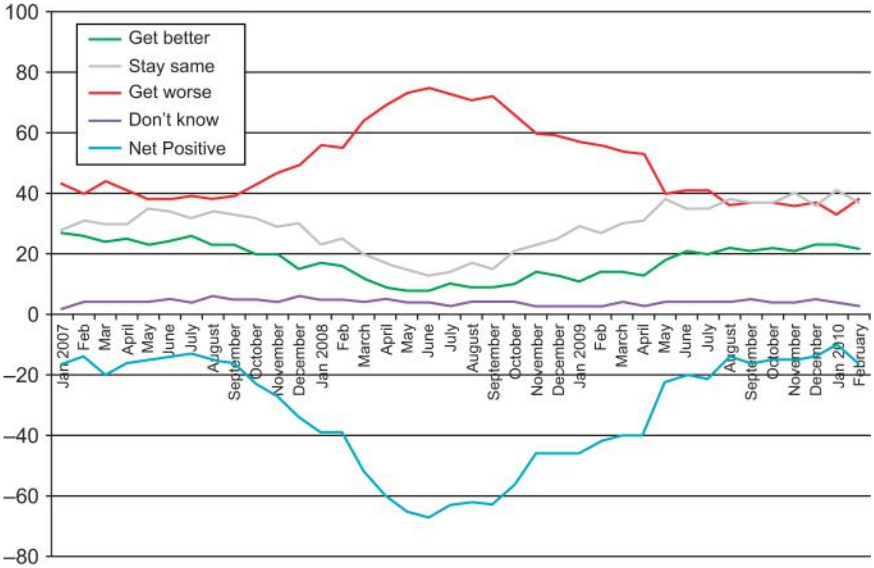


Notes: YouGov Prosperity Index. Overall prosperity index number derived from answers to survey questions 1, 2d, 4, 5; if all these questions produced equal numbers of negative and positive responses, the index would be 100. When the index is less than 100, there are more negative than positive responses; when the index is more than 100, there are more positive than negative responses

Figure 11.
Prosperity optimism

satisfied with this outlook now, compared with higher levels of satisfaction witnessed between September and December 2009.

Fewer people are confident that their workplaces will grow over the next 12 months, with net agreement amongst those expecting the number of people employed in their



Q: How do you think the financial situation of your household will change over the next 12 months?

Source: Base: 2000 (NatRep)

Figure 12. Household finances and optimism

workplaces to go up in the next 12 months on somewhat of a downward spiral since the turn of the year (see Figure 13).

This, however, is at odds with consumers' likely satisfaction with the UK economy over the next 12 months. Here, we see more people adopting a more optimistic outlook, purporting to be more satisfied with the economy than last seen in early 2008, that is, pre-recession. Election hopes and promises might be impacting in part on sentiment here (see Figure 14).

Conclusion

This article has painted a mixed picture of how people's attitudes and actual spending behaviours have changed since the onset of the credit crunch, then the recession, and what now feels like the slow road to recovery. Whilst things have stopped getting worse, for many people, the recession is still painfully real, and it is this that drives financial behaviour.

Although there are some "green shoots" to be seen as far as consumers are concerned, our most recent data from a variety of proprietary financial indicator datasets makes us hypothesise that these will be short-lived.

The uncertainty about UK plc's position as a leading global player, coupled with the innate and now well entrenched fears about job security, individual indebtedness and UK's credit rating worthiness, is fostering a nervous, cautious and more subdued consumer.

When it comes to savings and investment products in particular, financial services organisations should never forget that they are, after all, playing with consumer's

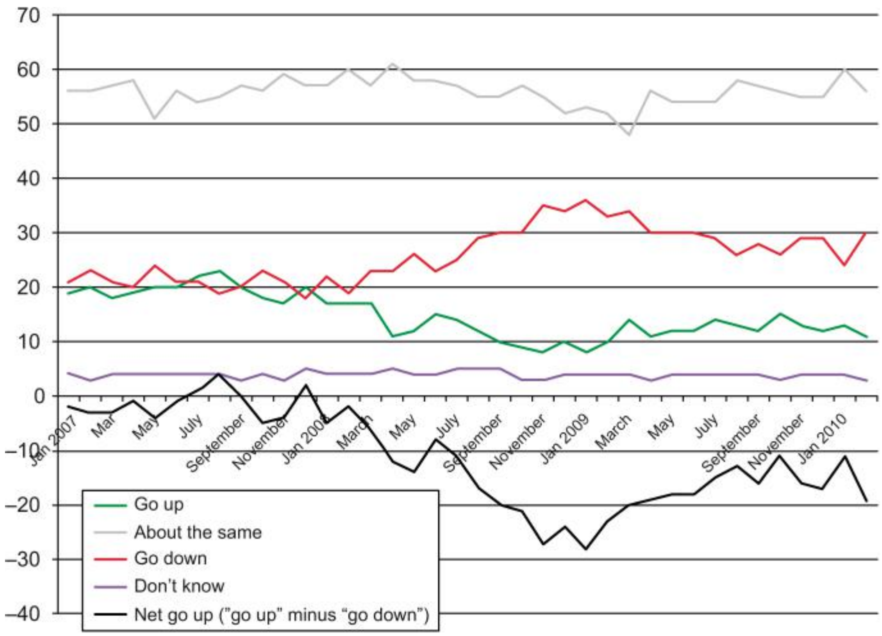


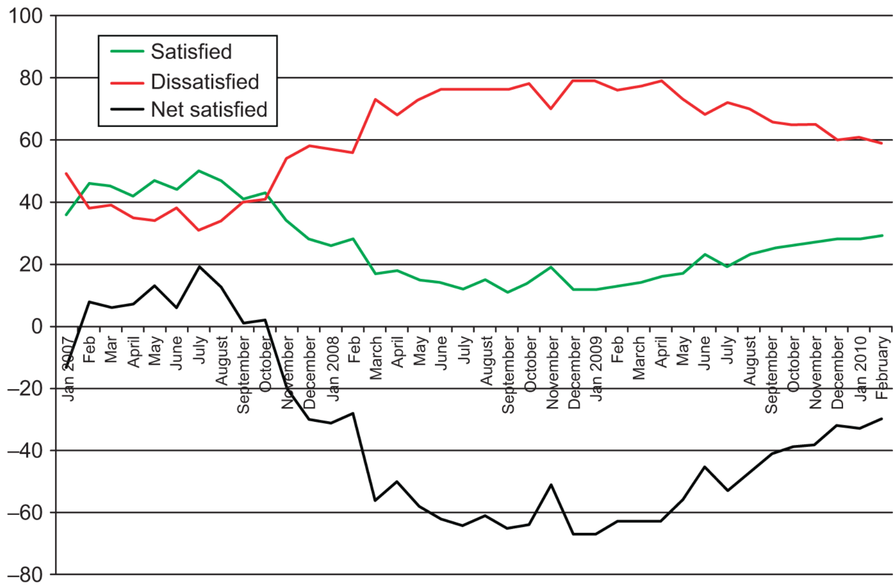
Figure 13.
Workforce optimism

Q. (To people who work at least 8 hours a week away from home) Thinking about your place of work, and how things will develop over the next 12 months, do you expect the number of people employed there to go up, down or stay about the same?

Source: Base: 1325

money. They are being contractually entrusted to look after and safeguard it and ideally, make it grow. For many consumers, they feel the contract has been rather one-sided, with banks able to treat customers as they choose, with little return or no regard for individual circumstances or personal situations. The recession has reminded us all that we may well need swift access to our cash, and, as a result, there has been a heightened desire and expectation for savings to increase. However, the huge lack of trust in traditional financial institutions has left consumers unsure of where to turn. There are some short-term winners, such as comparison websites as mentioned above. However, the real challenge is for institutions to create sustainable, truthful, honest, transparent and open dialogues with their customers. No more false or grossly over-egged promises. Simple offers from trustworthy sources will be the ones that do well. Anything less will not cut the mustard amongst consumers, who have awoken rather abruptly from their financial slumber, and who, as a consequence, have undertaken a radical and rapid post-mortem on their household finances.

Even with all the data and insights discussed above, there are still many questions to answer. Although Joe Public is more financially savvy and politically engaged (or voluntarily disengaged) than at any point in modern history, experience tells us that, in the long term, leopards rarely change their spots. On that basis, will some of the more thrifty, frugal consumer trends identified in this paper, such as cutting back on



Q: How satisfied are you with the likely strength of Britain's economy in 12 months' time?

Source: Base: 2000 (NatRep)

Figure 14.
Satisfaction with the economy

luxuries and nice-to-have things, withstand the test of time, or, as soon as we have had several consecutive months of moderate (as opposed to sensationalist) doom and gloom, will the "same old, same old" apply?

Will quality rather than price start to become a bigger priority for people again, or, will everyone continue to boil everything down to a simpler, common denominator, namely cost, given the hard times that undoubtedly lie ahead? Will people continue to exert conservatism or stoicism *vis-à-vis* their personal and household spend, or will they simply revert back to the decadent days as soon as the media green light is received that we are out of trouble?

Will consumers remain relieved and released because their values and morals have been challenged, because they have self-reflected and changed their ways, or will the "old" model of capitalism triumph, coming back with an even bigger vengeance? Will we simply accept that debt is indeed the new way of life and create new financial models around the assumption that most people will not be able to sail through life with their finances constantly in the black? Will we simply accept that a society predicated on debt and credit is to be the norm, at least for the foreseeable future, and will new forms of derivatives or financial instruments emerge to structure economic society on this very basis?

Have consumers learned a genuine lesson, the pearls of wisdom of which we will impart to future generations, or, after a brief respite, will everyone continue to see "borrowing as a way of life" and amend their lifestyle accordingly? It is well documented that Homo sapiens tends to revert to habitual behaviours in times of crisis.

Perhaps the globally inter-connected modern citizen, who for the first time has education, social freedom and global access to global and instantaneous information, can change his ways.

Note

1. YouGov's prosperity index is derived from expected changes in: household financial situation, satisfaction with standard of living, household spend on major purchases for home, and number of people employed at place of work.

About the author

Adèle Gritten is Head of Media and Financial Services Consulting at YouGov plc. She has an MA in Social and Political Science from Cambridge University. She has worked in client and agency side market research roles for over ten years, specifically focusing on media and financial services clients, both B2B and B2C. Adèle Gritten can be contacted at: Adele.Gritten@yougov.com

Measuring the financial capability of investors

A case of the customers of mutual funds in Finland

Antti Pellinen
Verist Ltd, Vierumäki, Finland
Kari Törmäkangas
Finnish Institute for Educational Research, University of Jyväskylä, Jyväskylä, Finland
Outi Uusitalo
School of Business and Economics, University of Jyväskylä, Jyväskylä, Finland, and
Anu Raijas
National Consumer Research Centre, Helsinki, Finland

Received April 2010
Revised September 2010
Accepted October 2010

Abstract

Purpose – The purpose of this paper is to provide further understanding of the financial capability of mutual fund investors, and compare internet and branch office investors. It seeks to examine mutual fund investors' abilities and awareness of the terms and risks of mutual fund investments using a novel measurement instrument.

Design/methodology/approach – Ability measurement techniques adapted from educational and psychological studies were applied in the paper. Empirical survey data were collected in Finland.

Findings – There were differences between different types of investors in terms of financial knowledge. The channel used by the investors in making investments differentiated the more knowledgeable internet investors from the less knowledgeable branch office investors.

Research limitations/implications – The subjects of the study are the clients of a mutual fund company. Future research could concentrate on examining the consequences of financial knowledge. One interesting question is how the consumers understand their personal financial capability and its role in their lives.

Practical implications – The measures and indicators of financial capability are important evaluative instruments for banks and financial corporations as well as for the authorities involved in evaluating investors' financial behaviour.

Originality/value – The ability measurement technique adapted from education and psychological research proved to be applicable in the field of financial capability measurement.

Keywords Financial management, Financial information, Unit trusts, Investments

Paper type Research paper

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
pp. 107-133

0265-2323
DOI 10.1108/02652321111107611

1. Introduction

Active financial markets are important to the whole of society. From the 1980s, the structural and technical changes in the financial market, as well as internationalisation have modified and even created financial products. The supply of these products has extended and diversified. The interest of households in investing has increased, particularly in the last decade. The amount of privately-owned financial capital has rapidly increased during the past ten years throughout Europe (European Central Bank, 2010). The increased wealth of households has expanded the opportunities to invest instead of using conventional bank deposits. Furthermore, the discussion concerning the ageing population and the sufficiency of pension plans has increased the interest in saving for the future (OECD, 2005).

Financial institutions today develop and offer a wide assortment of financial services, especially investment services including new and unpredictable risks for consumers and themselves. This means that more consumers have become acquainted with various financial products and services and have entered financial markets as investors. In today's wealthy and market-oriented environment individuals are increasingly required to take responsibility for their financial affairs (see, e.g. Atkinson *et al.*, 2007). People need to be able to manage their finances in order to maintain their well-being, and in many countries for example people's pensions are highly dependent on their financial know-how.

The financial authorities and companies on the field of financial services have recently expressed concerns over the level of financial awareness of consumers (FSA, 2005, 2006a; OECD, 2005; FINRA, 2009). For instance in the US, Ben Bernanke has given several speeches expressing his concern about the low level of information investors' in the changing financial service industry are working with (Bernanke, 2008, 2009). Consumers' capability to manage their finances has also become one of the key consumer issues in the EU (see McCreevy, 2007).

The changes in the financial markets and the challenges facing private investors, underline the necessity of measuring how well individual investors are informed about the concepts and terms concerning their investment or credit market in general. This study concentrates on examining mutual fund investors' abilities and their awareness of the terms and risks of mutual fund investments. The aim is to obtain information that can be used when developing credit markets and planning information campaigns targeted at private investors who make choices on mutual funds. The purpose of this paper is to provide further understanding of the financial capability of mutual fund investors, and compare internet and branch office investors. In addition, we investigate if the level of capability differentiates investors in terms of their investment behaviour. Thus we put forward the following research questions:

(1) We explore if the capability level of the investor is connected to investment behaviour. Specifically, have those investors investing in equity funds with a high risk and return got better knowledge and ability than money market investors?

(2) We examine if there are differences in capability between those who use the branch office and those who use the internet when making investment decisions.

(3) We investigate the investors' awareness of their own capability. Overconfidence is present if investors think that they know more about the investment field than they actually do.

(4) We examine if investors with different capability levels use different information sources.

The structure of the paper is as follows. In the first section the concept of financial capability is explained and defined. After that we present a brief review of mutual funds as investment objects and summarize previous findings concerning investors' motives and decision making. Subsequently, we present the methodology used in estimating the mutual fund investors' capability, and the results of the empirical study. Finally, conclusions and implications of the study are discussed.

2. Conceptualising financial capability

In a contemporary world, consumers' capability to manage their finances may to a large extent affect their well-being. Consumers are expected to be active and well-informed in their financial activities and they are responsible for the consequences of their choices.

Education and counselling authorities, in particular, have been interested in defining financial capability. According to the UK Financial Services Authority (FSA, 2005), financial capability consists of an individual's personal characteristics that are influenced by several factors in their micro and macro environment. The influence of environmental factors on a person's capability is essential because every person lives in a certain society and belongs to various communities. The societal environment gives the framework for consumer activities and the forum for the interaction between the actors in the society. This view focuses on both the depth and breadth of financial capability. The depth of financial capability is related to an individual's personal characteristics:

- financial knowledge and understanding;
- skills and competence; and
- responsibility (FSA, 2005, p. 7).

The breadth of financial capability refers to the investors' knowledge, skills and responsibility about the variety of financial commodities in the market, e.g. financial services and institutions, legislation, taxation. Below, we will examine these concepts more closely.

Financial knowledge and understanding means that a person knows and understands the forms, functions and use of money and financial services. Financial knowledge and understanding are needed when a person decides upon the best way to conduct payments and take care of banking issues. Financial knowledge and understanding involve the awareness of the income available: that is, how much money there is for consumption and saving. In financial behaviour it is also relevant to understand taxation questions. Hilgert and Hogarth (2003, pp. 320-321) have suggested that financial knowledge is associated with financial practices like cash-flow management, credit management, saving and investment.

Financial skills and competence are know-how that are shown in the practices and habits formed in everyday and long-term financial management. Financial skills and competence are based on financial knowledge and understanding and are influenced by attitudes towards the use of money, i.e. spending and saving (Cramer *et al.*, 2004).

Consumers who behave financially responsibly take into account the other members in their environments, like family members, relatives and friends, when making financial decisions (Financial Capability through Personal Financial Education, 2000, p. 6; Roy Morgan Research, 2003, pp. 73-76). A financially responsible person understands that the decisions made always have an influence on other people or actors in the community. Responsible behaviour is also needed to provide for potential economic, social or personal risks in the future.

In this article, we have modified the earlier definitions of financial knowledge, financial skills and competence, and financial responsibility from the perspective and environment of our study. The dimensions of financial capability interact strongly with each other. Financial knowledge and understanding, skills and competence, and responsibility are of no use unless consumers are able to use them in practice. Thus, people's financial market behaviour is an essential element of financial capability.

How much knowledge and what skills does a person need to reach a sufficient level of competence in financial issues? Financial capability and its dimensions have various levels: from basic to extended ones. The development of financial capability is influenced by various inner and outer factors. Inner factors contain consumer demographic characteristics (like sex, age, education, phase of life) and mental ones (like values, attitudes, preferences, habits). Outer factors are the factors in micro and macro environments (culture, inflation, and infrastructure). In other words, financial capability develops in a process that evolves over a person's life cycle and follows the circumstances in society (see Leskinen and Raijas, 2005).

In this study we focus on private investors' financial knowledge and understanding, and investigate how this aspect of financial capability becomes evident in their actual investment decisions. The investment process is influenced by five domains (Figure 1): information, taxation, investment period, risk-taking vs expected returns and the

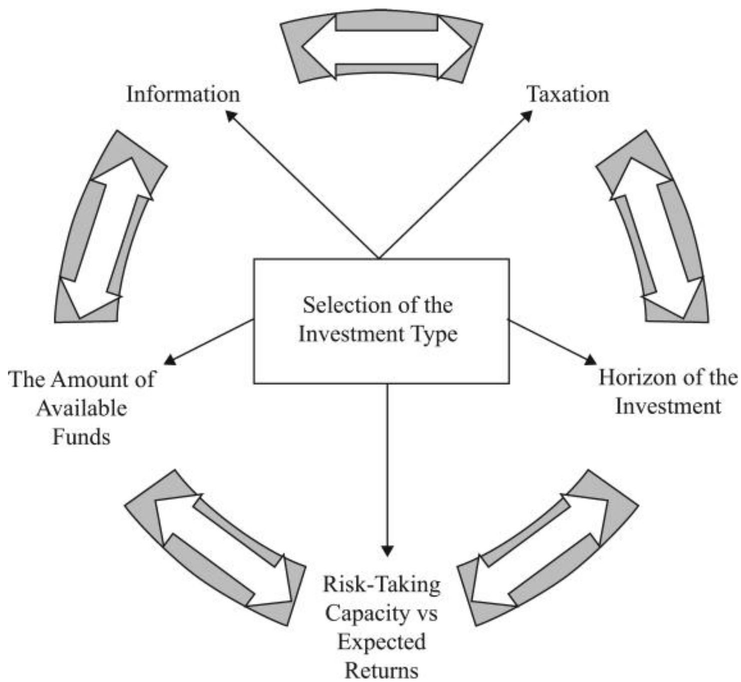


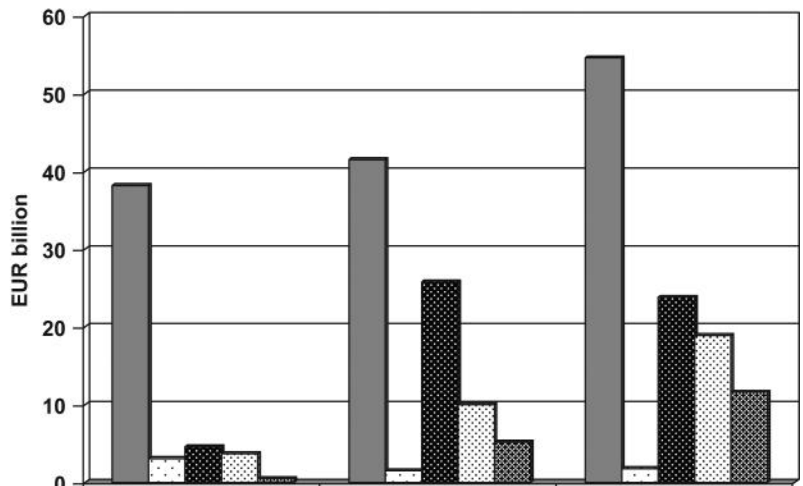
Figure 1.
The main domains in planning the investment type

amount of available funds (Puttonen and Kivisaari, 1997). To construct the measurement instrument, a group of multiple-choice items was developed covering the mutual fund investors' knowledge and skills.

3. Mutual funds as investment objects and investment behaviour

Economic growth has increased both the wealth of households and the liberation of the money market. These two factors have in turn multiplied the opportunities for investing. While the amounts of all available assets have increased, the shares of mutual funds and insurance savings have grown the most. Since the adoption of the euro as the common currency in most European countries, the basic interest rate of loans and savings has been relatively low. The low interest rate of bank deposits has increased savers' interest in new investment alternatives, such as mutual funds. Figure 2 displays the change that has occurred in Finland. After 1995, the amount of mutual funds and insurance savings started to grow, and the rate of growth has accelerated since 1999.

At the same time, the marketing of mutual funds has increased radically. The new investment products offer consumers new opportunities to gain more profits, but at the same time, the risk of losing money has increased. This changeover from bank deposits to mutual funds has led to a new situation, in which consumers are required to learn new financial concepts and, most importantly, to understand the relation between risk



	1995	2000	2005
Deposits	38.2	41.5	54.6
Bonds	3.1	1.5	1.8
Stocks	4.6	25.8	23.8
Ins.savings	3.7	10	18.9
Mutual funds	0.5	5.2	11.6

Data Sources: The Finnish Bankers' Association, Bank of Finland, Statistics Finland, Federation of Finnish Insurance Companies

Figure 2.
Investment of assets in different securities

and return (see Bell and Eisingerich, 2007). This kind of change is difficult to follow for consumers and they may be forced to trust bank personnel, or be able to find information from other sources like the internet.

In the last few years, banks and insurance companies have vigorously developed mutual funds for investors. This has led to mergers between these different branches and to new finance corporations or consortium groups. Their mission is to introduce mutual funds for private investors and to give them basic information about suitable investment funds, their expected returns and other terms. Thus, after a customer has decided to make an investment, bank personnel usually takes care of practical operations. The personnel are responsible for giving full information concerning the investment of clients. On the other hand, it is also possible to invest money in the mutual funds in the internet, in which case private investors are supposed to find out the terms and risks of the investment.

Mutual funds usually consist of stocks and bonds, which are owned by a group of investors: be they persons, associations or foundations (Fabozzi *et al.*, 2009). The owners of the mutual funds are called investors. A fund management company takes care of investment decisions, when a financial company or a bank maintains the funds. The net asset values account for capital gains, dividends (reinvested) and management fees (subtracted). The investment activities of the fund management companies are monitored by the authorities, for example in Finland the Finnish Financial Supervision Authority issues licenses for mutual funds and monitors their operations.

Mutual funds are marketed in ways similar to those of many other consumer products, and buying them is becoming almost a familiar task for consumers (Wilcox, 2003). For the consumer, buying daily products and durable goods is usually a familiar process, and they come with guarantees for a fixed period, whereas buying investment products is primarily different in that they do not generally carry any guarantees. Thus the investors' uncertainty is higher, and they should have better awareness of the risks and greater resources in order to take them.

The prior literature on investors' motives and decision making has traditionally assumed that an investor behaves rationally. However, rational decision making demands an excessive amount of time in gathering relevant information about the risks and rate of return of a specific investment, investment terms in general and knowledge of markets. A rational choice perspective is not enough since decisions based on trust usually involve both reasoning and feeling (Komiak Xiao and Benbasat, 2006). Capon *et al.* (1996) pointed out that investment as a rational activity cannot be based on rational decision making in the majority of cases, but is more or less based on the beliefs and behaviour of the investors.

Kahneman and Tversky (1979) made a significant contribution related to the psychology of economic decision making under uncertainty. They showed that financial decision making does not follow the assumptions of rational decision making. The implications of Kahneman and Tversky's (1979) findings have been investigated in several studies, and they indicate that further studies concerning the knowledge and ability of investors and their links to decision making are needed.

Behavioural finance literature investigates the influence of social, cognitive and emotional factors in financial decision-making. The main empirical problems studied in behavioural finance are loss aversion, overconfidence, optimism, pessimism and reaction to market news (Godoi Kleinubing *et al.*, 2005). The empirical findings from behavioural finance have suggested that a person may even behave irrationally concerning her/his financial issues. In this kind of behaviour, research has found constructs like mental accounting, decision framing, regret avoidance and familiarity bias.

The influence of financial information in decision making is very complicated. Mullainathan and Thaler (2000), for example, suggested that a person may place too much trust in certain institutions, and then neglect to gather any information. The opposite reaction is that a person is too sensitive to new information, resulting in an overreaction to the situations where the information is relevant. Private investors are usually more concerned about the losses in the short term than payoffs in the long term. For them, lost money is more valuable than captured money (Kahneman and Tversky, 1979). Therefore people prefer the safe modes of investments, like bank deposits.

Affect as an important part of human information processing and decision making has been acknowledged by the behavioural finance researchers (e.g. MacGregor *et al.*, 2000; Statman *et al.*, 2008). Statman (2004) suggests that investors expect not only utilitarian benefits such as low risk and high expected returns, but also expressive benefits such as patriotism, social responsibility and fairness.

Researchers in the finance-marketing interface have also challenged the assumption that investment decisions are made purely based on expected financial returns and risks. Aspara and Tikkanen (2010) found that individual investors' willingness and decisions to invest in certain companies' stocks is linked with their evaluations of these companies' products and brands. Aesthetics may have a role when investors evaluate a company's stocks as investment objects. Then, the investor aims at expressing him/herself and shows appreciation of the products and brands of the company (Aspara, 2009). However, in the case of mutual funds, the effect of the company is likely to be minimal.

Even though investment behaviour has traditionally been regarded as rational decision making based on information, the recent literature shows that various affective and behavioural factors are present in investors' decision-making processes (Shefrin, 2002; Slovic *et al.*, 2004). The presence of affect does not, however, imply that information, knowledge, and capabilities are unnecessary qualities. Successful investment performance is likely to be based on the investors' awareness and understanding of the investment terms and his/her capability to act on this knowledge.

4. Empirical study

The private investment business is relatively immature in Finland, and thus the investors' knowledge of the investment field may not be very extensive. The Finnish context highlights a case in which mutual fund investors have faced a rapid change from a regulated financial environment towards a free market-based supply of investment instruments, such as mutual funds. In 2004, 17 per cent of all Finnish households owned mutual funds. An average amount of an investment was €18,000. The largest investments were held by the age group of 55 to 64 years, entrepreneurs and the highest wealth cohort (Säylä, 2007). Moreover, there has been a considerable change in the use of the distribution channels through which investments are made. The use of the internet has increased in Finland so that 28 per cent of bank clients used it to manage their banking services in 2001 and in spring 2005 the percentage was 66 per cent (Finnish Banker's Association, 2005).

The observations selected for this study were mutual fund investors excluding investors under 18 years old, investors with a professional status or those investing very high amounts (over €100,000). The respondents were sampled from the customer base of two different mutual funds managed by the OP fund company. The company has been operating in the market for a long time and is considered a substantial provider of financial products. OP-Euro is a money market fund that primarily invests in the euro-denominated short-term bonds and money market instruments within the EU area. It is marketed as a low-risk alternative. OP-Delta is a country-specific equity fund primarily investing in equities and equity-related securities issued by Finnish companies. The risk level of this fund is higher because of its policy of investing in equities.

In order to examine the influences of the past investment behaviour and the choice of the distribution channel, we constructed four groups, which operated as the basic sampling units (see Table I). In the sampling plan an equal amount of observations were obtained from the selected four groups. The goal was to collect 400 respondents both from the branch office and internet investors in order keep sampling error under 5 per cent of the standard deviation[1] in both sampling units. For balanced comparisons both sampling units were divided into two groups or strata (200 respondents each) based on the risk profiles of the funds. Thus, we obtained observations from four types of investors. Because the return rate in this kind of study is typically estimated to be around 25 per cent, the designed sample consisted of 3,200 individuals to achieve 800 respondents to the executed sample.

Respondents who returned the questionnaire were entered into a draw for €500 in mutual funds and ten low-value prizes were available for runners up. As a result, 30.7 per cent ($n = 983$) of the people receiving the questionnaire returned it. The minimum target of 400 respondents set for the two sampling units was not achieved from the branch office investors (388), but it was clearly exceeded from the group of internet investors (595). Among the branch office investors there were 172 money market fund investors and 216 equity fund investors. The group of internet investors consisted of 266 money market fund investors and 329 equity fund investors.

5. Method of estimating the mutual fund investors' capability

The instruments used to evaluate financial capability have been on the agenda of the financial service authorities in many countries, for instance in the UK (FSA, 2006a). The OECD (2005) reported on financial literacy surveys in 12 countries. The key findings in these surveys were:

- the low level of financial understanding among respondents;
- financial understanding is correlated with education and income level;

Table I.
The mutual fund investor groups – a sampling plan

	Money market funds	Equity funds	Total
Branch office investors	200	200	400
Internet investors	200	200	400
Total	400	400	800

- overconfidence; and
- the notion that consumers feel financial information is difficult to find and understand.

Regarding the measurement of financial literacy, the OECD (2005) suggested the use of a uniform questionnaire with similar questions in all the member countries. This would allow comparisons of financial literacy across the countries. The report also recommended an objective test instead of a subjective self-assessment of the understanding of financial issues. The national survey of the financial capability in the UK covered attitudes and behaviours that were more or less capable (FSA, 2006a). Our study utilises the approach which earlier instruments related to financial capability have used. However, the earlier instruments have investigated financial capability on a wider level. Our study differs from the earlier studies; it focuses on the financial capability in investment behaviour, which can be measured by correct and incorrect factual knowledge.

The capability measurement technique applied in this study is adapted from the field of educational and psychological studies. These fields have developed sophisticated ability measurement techniques and methodologies. The educational researchers have used the Rasch model and ability measurement for over 30 years when measuring students' ability in different subjects at school. This measurement technique is suitable for any kind of ability or achievement evaluation, if the items are tailored to fit the subject area in question.

The measurement instrument is based on the five domains presented in Figure 1. In accordance with these domains, 65 items were developed based on expert sources such as publications of a mutual fund company (Monthly report 2/2005 OP-Euro, OP-Delta Fund), publications of the Finnish Foundation for Share Promotion (Tax Guide for Investor, 2005; Mutual Fund Guide, 2005), and a handbook for investors (Puttonen and Repo, 2003).

Because the items included in the measurement instrument have not been used before, the testing instrument including the 65 multiple-choice items was piloted using the classical item analysis (Allen and Yen, 1979) and the Rasch model (Rasch, 1960; Wright and Stone, 1979; Smith, 1992; Smith and Smith, 2004; Baker, 2001; Bond and Fox, 1998). In a pilot study there are two goals in applying the Rasch model to a group of items. First, there should be items with different difficulty levels covering a relatively large calibration area and, secondly, the best items for the final study should be qualified by using the fitting indices. The items were analysed by using the Winsteps-program (Linacre and Wright, 2001; Linacre, 2001), which provides information on the whole test. The Winsteps program calculates the unidimensional factor for the items included in the analysis. It also calculates the correlations between the estimated score and single items and the amount of unexpected answers measured by fitting values (standardised mean squares). Based on this pilot test, 25 easiest items were dropped from the scale, taking into account that all five domains of financial ability were covered. Accordingly, the 40 most qualified items were included in the final questionnaire (see the Appendix). The earlier applications of this method in the field of education give firm support that the use of 40 items results in a separation of the respondents according to their abilities.

To measure the ability and knowledge, a multiple-choice test with 40 items was presented to the respondents and the ability was computed as a score of the correct answers. The multiple-choice items with four response alternatives (one correct, three incorrect) were analysed with the dichotomous Rasch analysis by using the Winsteps-program.

One goal in planning an item test is to design items that vary in their level of difficulty, so that the calibration level is sufficient to be able to discriminate between respondents in terms of their ability. Another, equally important goal is to have a very good fit between the model and data. This is one of the results and advances of the Rasch analysis.

The reliability of this kind of measurement is based on the fitting values. If the respondent answered according to his/her ability to a certain item, the reliability of this item is acceptable. In this study the reliability of the item scale was high (Cronbach Alpha = 0.86). The validity of this kind of measurement is considered good, provided that the items support the score and if they are based on the expertise of the field studied. In the Rasch model the validity can be improved leaving out items with poor fitting values.

Potential factors affecting investment behaviour such as gender, age, education and the identity of the investment decision maker in the family were included in the questionnaire as background variables. Moreover, questions concerning the respondents' investments were also added to the questionnaire, e.g. time span of investment, length of affiliation with the branch office, number of times investments had been made and the total amount of investments. Finally, we enquired about the sources that the respondents used when seeking information concerning investment markets or the mutual funds.

6. Results

The respondents were divided into four groups according to the distribution channel used and the risk profile of the investment. Branch office investors made their investments in the office, and received personal information. Internet investors have made their investments through the direct channel. Moreover, money market fund investors represent short-term investment with low risk and equity fund investors represent long-term investment with high risk. The ability score distributions of different investor groups are shown in Figure 3. The distribution for the whole sample is near to the normal distribution, but there is a lot of random deviation in all groups.

The least knowledge group (group 1, mean score 51.95) is the branch office group with money market funds, who have invested their money in relatively secure mutual funds avoiding any risks. The second weakest (group 3, mean score 57.38) is the investors who have taken the risk, and possible return, but use the branch office. Both of the internet channel groups (group 2, mean score 61.10 and group 4, mean score 65.92) have better ability estimates than the branch office investor groups, but the internet group (group 4), who invests in equity funds instead of in money market funds, obtained the best ability estimates and thus has the best knowledge of investment markets.

The branch office investors receive personal service whereas the internet investors gather information independently. The results show that the knowledge of the branch office investors is at a low level. Thus the clients have not received enough information from the branch offices, or they have not understood and internalised the investment terms. Nevertheless, the group with the weakest knowledge has invested in a low risk

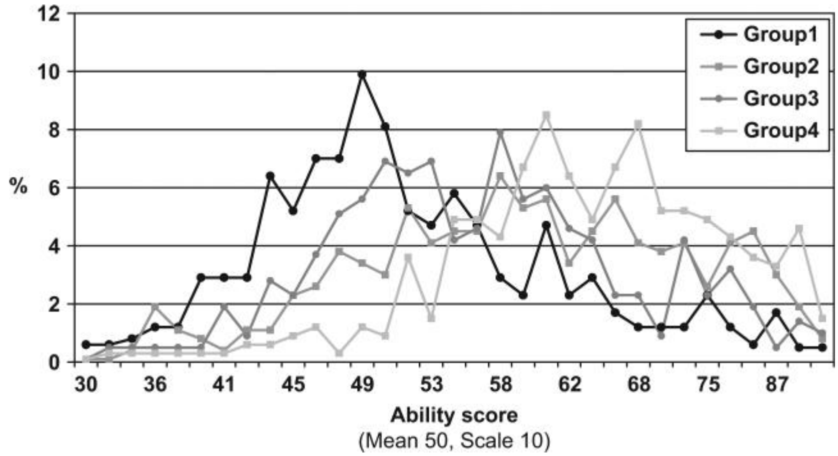


Figure 3. The empirical ability distributions of the investor groups (Cronbach $\alpha = 0.86$)

fund, and thus these investors' behaviour can be considered compatible with their financial knowledge and understanding.

The internet investors are more or less active in collecting information. They receive information concerning the funds, and they have to mark an x in the internet interface confirming that they have read the terms of the fund. But as users of the channel without personal service, they are more independent to decide how much and what information sources they use. The results of this study indicate that the internet investors have a high level ability and knowledge of the investment markets.

The corresponding ability means and standard deviations for the investor groups are shown in Table II. The means of all groups are above the mean of the item scale 50[2] which indicates either that all groups did rather well, or the test was easy. The internet equity fund investors obtained higher scores than the other investor groups. The standard deviations are larger for internet investors indicating that ability is more heterogeneous among internet investors.

6.1 Explaining the variation of the capabilities

The influences of the background variables (gender, age, education, the identity of investment decision-maker in the family) were tested with the t-test or in straightforward variance analyses. It was found that the male respondents obtained better ability scores (mean 61.9) than females (mean 57.7) with equal variances. The

Investor group	Number of investors	Mean of the group	SD of the group
Branch office investors, money market funds	172	52.0	9.8
Internet investors, money market funds	266	61.1	13.3
Branch office investors, equity funds	216	57.4	10.8
Internet investors, equity funds	329	65.9	12.7
Total	983	60.3	13.0

Table II. The ability means and standard deviations of the investor groups equity fund investors with higher risk were mainly men and this may explain why the men did better than women in this study.

Age was classified in the questionnaire into ten-year intervals from 18 to 68 years. When there were no respondents over 65 years, the classification included five age groups. The age difference was statistically significant with $p = 0.02$ (< 0.05), as the youngest and oldest group obtained a little lower ability scores than the middle groups. The lack of responses from investors over 65 years was surprising, because people at this age usually have a lot of money to be invested. Based on bank statistics, almost 10 per cent of the respondents should have been in that over-65 age bracket.

The education level of the investors was the best predictor of ability. The education levels ranged from the minimum basic education level (ability mean 53.5) via professional school or higher level education to the maximum university degree level (ability mean 66.7). The difference between these groups was statistically significant ($p = 0.000$). It is not surprising that more educated people were used to looking for information and thus were also more educated in terms of investment knowledge.

The responses to the question concerning the identity of the investment decision maker in the family showed that almost all of the respondents had an active role in the investment decisions. Only 4.1 per cent of the respondents had a mutual fund investment while not participating in the decisions concerning that investment.

Investor experience, measured by the length of time investing in a particular fund and the amount of mutual fund investments, explained some of the differences in ability. Money market fund clients who had been investing in these mutual funds over a longer time (6-10 years) obtained considerably lower ability scores than those money market fund clients who had been investing in these funds over a shorter time (less than six years). Furthermore, those money market fund clients who invested smaller amounts (less than €1,000) obtained lower ability scores than any other group. Investor experience did not explain ability differences among equity fund clients.

6.2 Are novices and experts different investor groups?

The respondents were classified into two equal size groups according to their ability scores in order to examine if there are differences in the investment behaviours of the novices and experts. As reported above, investor experience, especially the length of time investing in a particular fund, does not necessarily increase investors' capability. We wanted to investigate the factors that differentiate novices and experts from each other. The respondents were divided into two even groups by conducting a median split. The group with the median value was added to the expert group. The novices group consisted of the respondents with an ability score of below 57.7 ($n = 477$ or 48.5 per cent), and the expert group included those respondents with higher scores ($n = 506$ or 51.5 per cent). Table III shows that the money market fund investors, who use the branch office to make their investment, are mostly novices (79.1 per cent). The number of novices is also high among the branch office investors, who have made equity fund investments (60.0 per cent). The majority of the investors in the group who have made an equity fund investment by using the internet (73.9 per cent) could be termed experts. The group of internet investors with money market funds included more experts than novices. In general, there were more experts than novices found among the internet investors, while the branch office investors were mostly novices.

6.3 Do investors overestimate their knowledge?

The accuracy of investors' evaluations about their own knowledge is an important aspect in financial decision making. Confidence in decision making can be considered a positive human behaviour trait, and often a lack of confidence is seen as failure. It has been proposed that investors also tend to consider themselves better investors than they actually are (e.g. Barber and Odean, 2001). This phenomenon – called overconfidence – was measured by the respondents' opinions of their own knowledge concerning money markets. The stated opinion was compared with the measured capability score. Subsequently, the sample was divided into five groups based on the ability scores (see Table IV). High values in the upper right corner of Table IV indicate overconfidence, and high values in the lower left corner mean lack of confidence. The results show that most of the respondents in this study are located on the diagonal of the table, indicating that they have an accurate view of their own investment capability.

6.4 Information sources and financial capability

We also wanted to know whether the investor groups differed in terms of the information sources that they used to seek understanding of the financial markets and mutual funds. The possible information sources cross-tabulated with the four groups of investors are shown in Table V. As many as 79.6 per cent of the internet investors, who have invested their money into the equity funds get their information primarily from the internet and also to some extent from their job and studies, while only 11.2 per cent of these investors use the bank as the information source. The internet investors, who have invested in the money market funds, get somewhat more of their information from the bank (37.6 per cent) than the internet (32.3 per cent), whereas the equity fund investors of the branch office surprisingly get slightly more of their information from

	Novices		Experts		All respondents	
	n	%	*n*	%	*n*	%
Branch office, money market funds	136	79.1	36	20.9	172	100
Internet, money market funds	124	46.6	142	53.4	266	100
Branch office, equity funds	131	60.6	85	39.4	216	100
Internet, equity funds	86	26.1	243	73.9	329	100
Total	477	100.0	506	100.0	983	100

Table III. Novices and experts among the investors

	Self assessment					
Ability group	Poorly	To some extent	Enough	Well	Very well	Total
Poorest ability	70	74	50	5	4	203
Poor ability	49	63	49	13	1	175
Middle	19	63	108	22	2	214
Able	6	20	119	54	8	207
More able	0	8	69	74	32	183
Total	144	228	395	168	47	982

Table IV. Investors' confidence in their own ability as investor

Source of information	Investor group Branch office, money mkt funds (%)	Internet, money mkt funds (%)	Branch off, equity funds (%)	Internet, equity funds (%)	Total (%)
School	6.4	8.6	3.7	9.4	7.4
Work	0.6	9.8	6.0	9.7	7.3
Magazines, internet etc.	13.5	32.3	39.4	60.5	40.0
Friends	2.9	6.0	10.6	2.4	5.3
TV programmes	1.2	0.8	2.8	1.2	1.4
Investment club etc.	1.2	1.5	0.5	0.3	0.8
Contact person in the bank	73.1	37.6	34.3	11.2	34.2
Member of finance union	1.2	3.4	2.8	5.2	3.5
Total	100.0	100.0	100.0	100.0	100.0

Table V.
The source of information in planning the investment

the internet. Money market investors mainly get their information from the bank (73.1 per cent).

Table VI shows the information sources of the experts and novices. There are notable differences between these groups in terms of information acquisition behaviour. Novices use the bank as the most important source (55.0 per cent), while the experts use the internet (50.6 per cent), information from the workplace (13.0 per cent) and studies (11.3 per cent). The latter indicates that there are more educated respondents in the experts group.

7. Conclusions

The purpose of this study was to provide further understanding about the financial capability of ordinary mutual fund investors' knowledge and ability. Financial capability was conceptualised as the investors' knowledge concerning their investment into mutual funds. Thus, financial capability is a latent trait, which can be evaluated with indicators (test items). The measurement instrument (the Rasch model) was based

Source of information	Investor group Novices (%)	Experts (%)	All respondents (%)
School	3.4	11.3	7.4
Work	1.3	13.0	7.3
Magazines, internet etc.	28.8	50.6	40.0
Friends	7.1	3.6	5.3
Investment programmes on TV	1.9	1.0	1.4
Investment club, etc.	1.3	0.4	0.8
Contact person in the bank	55.0	14.6	34.2
Member of finance union	1.3	5.5	3.5
Total	100.0	100.0	100.0

Table VI.
The source of information in planning the investment decision

the techniques developed by the scholars in educational and psychological studies, that are experts in ability measurement. Five domains were adopted to evaluate financial capability from the perspective of a mutual fund investor: information, the amount of available funds, risk-taking capacity versus expected returns, horizon of the investment and taxation. Moreover, a measurement instrument to evaluate financial knowledge was developed consisting of a test with 40 indicators or items. By using these domains and the test instrument, financial knowledge of mutual fund investors was evaluated in the Finnish context.

The Rasch model operated well in the context of financial capability evaluation. The method provided personal capability scores for fund investors. This type of measurement could be an option for larger financial capability studies. The method measures factual knowledge and the same questionnaire could be used in different countries (see OECD, 2005). The results of this study are in line with the study in the UK (FSA, 2006b). Both studies highlight high education level as the important precondition for financial capability.

In order to examine whether the level of capability differentiates the investors in terms of their investment behaviours, the respondents were classified according to the channel through which they made the investment (internet or branch office) and the investment type they had made (high risk and return or low risk and return). The internet investors differed from the branch office clients in several ways. One important finding is that the internet investors had a high level knowledge of investment markets. They are well informed without any personal information from the branch office staff. They are able to search for information from various sources. Branch office investors used the financial advisors in the bank as their major source of information, and obtained low ability scores. Because of the important role of the financial advisors, their proficiency should be guaranteed by issuing personal licenses. For example, a questionnaire such as the one used in this study can also be used in evaluating the skill levels of the financial advisors. In addition, the role of the branch office staff to inform investors should be highlighted. At the moment, their role is often to recommend particular investments to clients rather than to provide objective information about the various investment instruments.

Different ability levels are associated with different behaviours, e.g. in terms of information acquisition. The results of this study raise the question about the role of the banks and other companies in financial sector as providers of information for investors. Experts, who have a good ability to make investment decisions, seem to search for information from various sources. Novices, on the contrary, get their information largely from the branch office staff. One implication from this finding is that the financial knowledge of clients should be taken into account when planning the contents and amount of information disseminated through the branch offices. However, while the branch office staff could give information and suggestions based on the client's knowledge level, the final decision and risk is carried by the client.

In addition, the type of mutual fund selected by the investor seemed to be a differentiating factor. The group tolerating the highest risk and return investment obtained the highest ability scores whereas the group with the lowest risk and return investment had less knowledge about the investment field. This finding indicates that investors behave consistently with their knowledge levels, and investors with low ability choose low risk investment instruments. However, consumers may incur negative consequences from their weak knowledge. A case in point is the money market fund clients with a long investment history in the same fund, who have obtained lower ability scores that the other groups. This group may have suffered from the low ability level, because it is likely that by investing in other investment instruments they would have obtained higher financial returns for their investments. Thus, in order to increase their long-term financial well-being, the low ability investors should be encouraged to improve their financial capability. Both the financial services companies and public actors could provide forums where consumers are learning new issues in the financial environment. Because of the constant changes in the financial markets and the instruments provided by the financial services industry, consumers have to update their knowledge and skills continuously.

There have been worldwide different pyramid scams or Ponzi schemes, which are types of frauds. The core message of these frauds is high return without risk. These frauds are possible because ordinary people have a low level in financial capability. The best consumer protection method in financial matters is a systematic study which finds those consumers with lowest level of financial capability. Improving their financial capability is a huge social task worldwide.

From the viewpoint of behavioural finance, the current financial environment challenges financial capability. The number of investment products has increased and for laymen, it is extremely difficult to compare them; even though there is much information available. When planning and implementing the policies and programmes that aim at increasing individual investors' financial capability, the financial services actors and public organizations are advised not only to provide increased amounts of information. As the behavioural finance literature suggests, the investors are also influenced by emotional and social factors (Shefrin, 2002; Slovic *et al.*, 2004) and they expect also expressive and emotional benefits from their investments (Statman, 2004).

Today consumers are supposed to be able to organise their financial issues to a great extent by themselves. They are expected to follow the changes in global and national economies, as well as in the financial markets. Regarding their own economy, consumers are also expected to take the initiative in the financial market. Thus many important skills are required, and this paper provides a method to estimate the factual knowledge that constitutes much of that skill set. These measures and indicators of financial capability offer important evaluative instruments for banks and financial corporations as well as the authorities to understand investors' financial behaviour.

The respondents in our study had experience of making investment decisions; they were clients of a mutual fund company. This paper considered domain-specific factual knowledge, and so other possible dimensions of financial capability are not included. The measures and indicators of financial capability are important evaluative instruments for banks and financial corporations as well as the authorities involved in evaluating investors' financial behaviour. It is to the benefit of all the actors in the financial sector that consumers are highly conscious of their financial behaviour.

However, while sufficient knowledge about financial products and concepts is important, it does not guarantee that investors are able to use the knowledge in investment decisions (see Kozup *et al.*, 2008). Therefore, future studies could concentrate on examining the consequences of financial knowledge. One interesting question is how the consumers understand their personal financial capability and its role in their life. What do consumers think they have to know about financial issues?

Future studies should focus on examining, for example, the multiplicity of financial issues that consumers should be aware of.

Notes

1. According to the basic principle of random sampling, 5 per cent sampling error is considered acceptable. Branch office investors and internet investors were regarded as separate samples, whereas the subgroups consisting of the investors of the funds with different risk profiles were regarded as strata of the samples.
2. The item calibration on the logit scale was rescaled to the mean value of 50. The value of the mean can be any number and it works as a barometer for the mean values of the respondents.

References

Allen, M.J. and Yen, W.M. (1979), *Introduction to Measurement Theory*, Brooks/Cole, Monterey, CA.

Aspara, J. (2009), "Aesthetics of stock investments", *Consumption Markets and Culture*, Vol. 12 No. 2, pp. 99-131.

Aspara, J. and Tikkanen, H. (2010), "Consumers' stock preferences beyond expected financial returns: the influence of product and brand evaluations", *International Journal of Bank Marketing*, Vol. 28 No. 3, pp. 193-221.

Atkinson, A., McKay, S., Collard, S. and Kempson, E. (2007), "Levels of financial capability in the UK", *Public Money and Management*, Vol. 27 No. 1, pp. 29-36.

Baker, F.B. (2001), *The Basics of Item Response Theory*, University of Maryland, College Park, MD, ERIC Clearinghouse on Assessment and Evaluation.

Barber, B.M. and Odean, T. (2001), "Boys will be boys: gender, overconfidence, and common stock investment", *Quarterly Journal of Economics*, Vol. 116 No. 1, pp. 262-92.

Bell, S.J. and Eisingerich, A.E. (2007), "The paradox of customer education, customer expertise and loyalty in the financial service industry", *European Journal of Marketing*, Vol. 41 Nos 5/6, pp. 446-86.

Bernanke, B.S. (2008), "The importance of financial education and the national jump$tart coalition survey", Speech, *Jump$tart Coalition for Personal Financial Literacy and Federal Reserve Board Joint News Conference, Federal Reserve Board, Washington, DC, 9 April 2008*, available at: www.federalreserve.gov/newsevents/speech/bernanke 20080409a.htm

Bernanke, B.S. (2009), "Community development financial institutions: challenges and opportunities", Speech, *Global Financial Literacy Summit, Washington, DC, 17 June 2009*, available at: www.federalreserve.gov/newsevents/speech/bernanke 20090617a.htm

Bond, T.G. and Fox, C.M. (1998), *Applying the Rasch Model: Fundamental Measurement in the Human Sciences*, Lawrence Erlbaum, Mahwah, NJ.

Capon, N., Fitzsimons, G.J. and Prince, R.A. (1996), "An individual level analysis of the mutual fund investment decision", *Journal of Financial Services Research*, Vol. 10, pp. 59-82.

Cramer, K., Tuokko, H.A., Mateer, C.A. and Hultsch, D.F. (2004), "Measuring awareness of financial skills: reliability and validity of a new measure", *Aging and Mental Health*, Vol. 8 No. 2, pp. 161-71.

European Central Bank (2010), "Monetary financial assets, household".

Fabozzi, F.J., Modigliani, F. and Jones, F.J. (2009), *Foundations of Financial Markets and Institutions*, Pearson, Upper Saddle River, NJ.

Financial Capability through Personal Financial Education (2000), "Guidance for schools at key stages 1 and 2".

Financial Services Authority (FSA) (2005), "Measuring financial capability: an exploratory study", Report for the Financial Services Authority by Personal Finance Research Centre, University of Bristol, Consumer Research 37.

Financial Services Authority (FSA) (2006a), "Levels of financial capability in the UK: results of a baseline survey", FSA, available at: www.fsa.gov.uk/pubs/consumer-research/crpr47.pdf

Financial Services Authority (FSA) (2006b), "Financial capability in the UK: establishing a baseline", available at: www.fsa.gov.uk/pubs/other/fincap_baseline.pdf

Finnish Banker's Association (2005), "Saving and borrowing in Finland", May.

FINRA Investor Education Foundation (2009), "Financial capability in the United States national survey: executive summary", FINRA.

Godoi Kleinubing, C., Marcon, R. and da Silva, A.B. (2005), "Loss aversion: a qualitative study in behavioural finance", *Managerial Finance*, Vol. 31 No. 4, pp. 46-56.

Hilgert, M.A. and Hogarth, J.M. (2003), "Household financial management: the connection between knowledge and behavior", *Federal Reserve Bulletin*, July, pp. 301-22.

Kahneman, D. and Tversky, A. (1979), "Prospect theory: an analysis of decision under risk", *Econometrica*, Vol. 47, pp. 263-92.

Komiak Xiao, S. and Benbasat, I. (2006), "The effects of personalization and familiarity on trust in and adoption of recommendation agents", *Management Information Systems Quarterly*, Vol. 30 No. 4, pp. 941-60.

Kozup, J., Howlett, E. and Pagano, M. (2008), "The effects of summary information on consumer perceptions of mutual fund characteristics", *Journal of Consumer Affairs*, Vol. 42 No. 1, pp. 37-59.

Leskinen, J. and Raijas, A. (2005), "Consumer financial capability: a life cycle approach", in European Credit Research Institute, Brussels (Ed.), *Consumer Financial Capability: Empowering European Consumers, Consumer Financial Capability Workshop, Brussels, 8 November 2005*, pp. 8-23.

Linacre, J.M. (2001/2004), *A User's Guide to WINSTEPS, Rasch Model Computer Programs*, MESA Press, Chicago, IL.

Linacre, J.M. and Wright, B.D. (2001), *A User's Guide to WINSTEPS, Rasch Measurement Program*, MESA Press, Chicago, IL.

McCreevy, C. (2007), "Increasing financial capability", Speech/07/202, European Commissioner for Internal Market and Services, Increasing Financial Capability Conference Brussels, 28 March 2007.

MacGregor, D.G., Slovic, P., Dreman, D. and Berry, M. (2000), "Imagery, affect, and financial judgment", *Journal of Psychology and Financial Markets*, Vol. 1 No. 2, pp. 104-10.

Mullainathan, S. and Thaler, R.H. (2000), "Behavioral economics", NBER Working Papers 7948, National Bureau of Economic Research, Inc., Cambridge, MA.

OECD (2005), *Improving Financial Literacy: Analysis of Issues and Policies*, OECD Publishing, Paris.

Puttonen, V. and Kivisaari, T. (1997), *Sijoittaminen ja sijoitusrahastot Suomessa ("Investment Policy and Mutual Funds in Finland")*, KY-Palvelu Oy, Helsinki.

Puttonen, V. and Repo, E. (2003), *Miten sijoitan rahastoihin ("How to Invest in Mutual Funds")*, WSOY, Helsinki.

Rasch, G. (1960), *Probabilistic Models for Some Intelligence and Attainment Tests*, Danmarks Paedagogiske Institut, Copenhagen (reprinted by University of Chicago 1980).

Roy Morgan Research (2003), "ANZ Survey of adult financial literacy in Australia", Final report, ANZ Banking Group, Melbourne, May.

Säylä, M. (2007), *Household Wealth Survey 1998-2004*, Statistics Finland, Helsinki.

Shefrin, H. (2002), *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*, Harvard Business School Press, Boston, MA.

Slovic, P., Finucane, M.L., Peters, E. and MacGregor, D.G. (2004), "Risk as analysis and risk as feelings: some thoughts about affect, reason, risk, and rationality", *Risk Analysis*, Vol. 24, pp. 311-23.

Smith, E.V. and Smith, R.M. (2004), *Introduction to Rasch Measurement*, JAM Press, Maple Grove, MN.

Smith, R.M. (1992), *Applications of Rasch Measurement*, MESA Press, Chicago, IL.

Statman, M. (2004), "What do investors want?", *The Journal of Portfolio Management*, Vol. 30, pp. 153-61.

Statman, M., Fisher, K.L. and Anginer, D. (2008), "Affect in a behavioral asset pricing model", *Financial Analysts Journal*, Vol. 64 No. 2, pp. 20-9.

Wilcox, R.T. (2003), "Bargain hunting or star gazing? Investors' preferences for stock mutual fund", *Journal of Business*, Vol. 76, pp. 645-63.

Wright, B.D. and Stone, M.H. (1979), *Best Test Design*, Mesa Press, Chigaco, IL.

Appendix 1

Please answer the following multiple choice questions checking the square, which you think is the correct alternative. **There is only one correct answer in each question.**

1. The purpose of financial markets is
   - ☐ Channel funding from the surplus sector to the sector with monetary deficit
   - ☐ Provide the Bank of Finland
   - ☐ Provide the Helsinki Stock Exchange
   - ☐ Sell Finnish stocks to foreigners

2. The Euribor-interest rate is the
   - ☐ Daily published market interest rate of the Euro-area
   - ☐ Interest rate defined by the European Central Bank
   - ☐ Fixed interest rate on the Euro-area
   - ☐ Interest rate defined by the Bank of Finland

3. The Euribor-interest rate for 3 months was at 08.02.2005
   - ☐ 0.54 %
   - ☐ 2.14 %
   - ☐ 4.54 %
   - ☐ 6.34 %

4. Deposit guarantee fund will protect the depositors' deposits in case an individual bank becomes insolvent up to the
   - ☐ 5.000 euros/bank coalition
   - ☐ 15.000 euros/bank coalition
   - ☐ 25.000 euros/bank coalition
   - ☐ Unlimited amount

5. Risk and return go hand in hand in the financial markets. The higher the risk for a certain investment, the better return is required by the investor. The highest risk of the following investments have the
   - ☐ Bank deposit
   - ☐ Stock of Nokia
   - ☐ Bond fund
   - ☐ Equity fund

6. In Finland the supervision of the mutual funds belongs to the
   - ☐ Finnish Foundation for Share Promotion
   - ☐ Finnish Bankers' Association
   - ☐ Finnish Financial Supervision Authority
   - ☐ European Central Bank

7. The assets of the mutual funds are owned by the
   - ☐ Bank
   - ☐ Fund management company
   - ☐ Shareholders of the mutual funds
   - ☐ Custodian

8. The reference index of mutual fund is the
   - ☐ Annual ranking of mutual funds in the Helsinki Stock Exchange
   - ☐ Comparison of the similar mutual funds between Finland and Sweden
   - ☐ Comparison of the return of the mutual funds with the reference interest rate of the Bank of Finland
   - ☐ Index, with which the mutual funds is compared

9. When stocks and bonds are combined to a portfolio, the return of the portfolio is the
   - ☐ Weighted mean of the returns of each security
   - ☐ Dividend yield of all securities
   - ☐ Best dividend yield in the portfolio
   - ☐ Sum of dividends and yields of profitable securities

Figure A1.
The ability items for the mutual fund investors

(*Continued*)

10. The maturity of a bond is the name used of the
- ☐ Emission company
- ☐ Uncertainty appended to the refunding of the bond
- ☐ Interest rate of the bond
- ☐ Term of the bond

11. Peter is changing his apartment. He has a normal salary account in the bank and no other investments. He will get the selling price today, but he did not have to pay the new apartment until after 6 months. Which of the next alternatives is the most recommendable to invest the selling pricef or 6 months?
- ☐ The equity fund
- ☐ The speciality fund
- ☐ The money market fund
- ☐ The bond fund

12. An ordinary mutual fund portfolio can hold stocks or bonds from the same emission company at most
- ☐ 25 %
- ☐ 20 %
- ☐ 15 %
- ☐ 10 %

13. Steven, 30 years old, wins a lot of money in the lottery and after all purchases he still has 100,000 euros left to be invested for a long period. His goal is to increase the amount of the money as much as possible so that he could retire at age of 60. The best way to invest the money in mutual fund would be the
- ☐ Money market fund
- ☐ Equity fund
- ☐ Bond fund
- ☐ Intermediate bond fund

14. When the interest rate increases, the value of the mutual funds
- ☐ Stays the same
- ☐ Decreases
- ☐ Increases
- ☐ The direction of the change cannot be estimated

15. The theoretical valuation of securities is the
- ☐ Present value of the expected cash-flow
- ☐ Corrected net value after inflation
- ☐ Market price corrected with an index
- ☐ Experts' estimation of the price of securities

16. Risks and returns of an investment are bound together according to the finance theory. A person, who invests all his assets in the stocks of Nokia, is seeking for
- ☐ High risk – high return
- ☐ High risk – low return
- ☐ Low risk – high return
- ☐ Low risk – low return

17. Investor's risk tolerance capacity has a big influence in the choice of a certain investment target. This tolerance capacity can be measured with what is the
- ☐ Maximum loss you can tolerate
- ☐ Return in the normal circumstances
- ☐ Return compared with the bank account
- ☐ Assumed expected profit

18. Risks and returns of an investment are bound together in the financial markets. The higher the risk the better return is required. The lowest risk of the following investment choices have the
- ☐ Equity fund
- ☐ Stock of Nokia
- ☐ Money market fund
- ☐ Bond fund

(*Continued*)

Figure A1.

19. The redemption fee is the commission paid by the
- ☐ Fund managing company, when it sells securities
- ☐ Investor, when the investor buys his share of the mutual funds
- ☐ Fund managing company, when the company buys securities
- ☐ Investor, when the investor redeems his share of the mutual funds

20. The risk premium is
- ☐ An additional profit over the interest yield without a risk
- ☐ A capital with risk
- ☐ An investment without a risk
- ☐ Investors' return without risk

21. In estimating the development of the future value of the mutual funds
- ☐ The development during the past year will tell the future development
- ☐ Bond funds profit always less than equity funds
- ☐ Big funds succeed definitely
- ☐ The future development cannot be foreseen with certainty

22. Fund management companies collect management fee from the shareholders of the mutual funds
- ☐ Once a year
- ☐ Once in six months
- ☐ Every month
- ☐ Included in the daily rate of the mutual fund

23. Diversification of the risk of an investment means that the assets are invested in
- ☐ Many targets, which reduces the risk
- ☐ The targets without a risk
- ☐ The exchange stocks without a risk
- ☐ The mutual fund without a risk

24. The investment horizon means
- ☐ A time point, when I get back my invested capital with the yields and dividends
- ☐ The economic expansion in the future
- ☐ The time span, which I have chosen for my investment
- ☐ A review of the Bank of Finland for the economic situation in 2015

25. Duration means with the bonds and mutual funds
- ☐ A parameter, which shows the interest level of the investment
- ☐ The average back payment time of the investment
- ☐ The average costs of the investment
- ☐ The expiry date of the investment

26. A mutual fund gets capital gain of the investments. The mutual fund pays taxes of the capital gain in Finland.
- ☐ 29 %
- ☐ 28 %
- ☐ 26 %
- ☐ 0 %

27. Which one of the next statements is true?
- ☐ A long investment horizon, a high expected return – choose equity fund
- ☐ A long investment horizon, a high expected return – choose money market fund
- ☐ A short investment horizon, a high expected return – choose money market fund
- ☐ A long investment horizon, a low expected return – choose equity fund

28. Peter is a mutual fund investor, who follows the development of his mutual fund daily in the newspapers. He cannot sleep, if the daily quoted value of his mutual fund is below the value of the previous day. The best investment type for him is the
- ☐ Equity fund
- ☐ Balanced fund
- ☐ Money market fund
- ☐ Bond fund

Figure A1.

(*Continued*)

29. When you are planning an investment, the planned purpose of the use of the money (for instance to buy a summer house or buy a car at a certain point in the future)

☐ has no relevance, except in the foreign investment
☐ has no relevance in making the choice for the investment type
☐ has a considerable relevance in making the choice for the investment type
☐ has a considerable relevance, only if the investment type is a money market fund

30. Considering the risk of an investment target, it is most accurately described by

☐ Without a risk it is impossible to gain considerable profits
☐ The risk is as big in all investment targets
☐ There is a risk only in stocks
☐ There is a risk only in the big investments

31. The risk of the investments can be measured with the volatility, which means

☐ The amount of losses
☐ The probability of losses
☐ The oscillation of returns
☐ The loss of return

32. The reference interest rate, which influences the economy of Finland, is given by

☐ The Board of the Bank of Finland
☐ Parliamentary Supervision Council
☐ The government of Finland
☐ The Commission of the European Central Bank

33. TER-figure measures

☐ The profitability of the closed deals of the mutual fund
☐ The charged fees of the mutual fund company
☐ The success of the fund manager
☐ The amount of profit of the mutual fund company

34. In the redemption of mutual fund it is necessary to pay taxes on the possible capital gain

☐ Based on taxations defined for the earned income
☐ Not at all
☐ Based on the taxation defined for the capital income
☐ 15 %

35. P/E-figure will tell the

☐ Relation between the market price and the profit of a certain stock
☐ Relation between the substance price and the share price of a certain stock
☐ Actual and real price of a certain stock
☐ Relation between dividend and share price of a certain stock

36. The interest yields of an ordinary domestic bank deposit are

☐ Tax-free
☐ Under the final withholding tax of the interest incomes
☐ Capital incomes to be reported to the IRS
☐ Partially tax-free, otherwise capital incomes to be reported to the IRS

37. Eric has invested assets in the equity fund, the value of which has increased strongly. He decides to transfer the money inside the same fund management company to the money market fund. Because of this change of investment policy

☐ Eric will not gain capital gain, because the same fund management company administers the assets
☐ Eric manages with final withholding tax, which is cashed by the fund management company
☐ Eric will gain a taxable capital income
☐ Eric will gain a taxable earned income

(*Continued*)

Figure A1.

38. The period of time, for which I am planning to invest my money, is called the
    - ☐ Investment horizon
    - ☐ Liquidity of an investment
    - ☐ Volatility of an investment
    - ☐ Substance of an investment

39. The nearest substitute investment for money market funds is to make an investment in
    - ☐ Stocks
    - ☐ Long-term bonds
    - ☐ Options
    - ☐ Bank account

40. When an investment target is liquid, then it is
    - ☐ Difficult to cash
    - ☐ Easy to cash
    - ☐ Overpriced
    - ☐ A risk investment

Figure A1.

Appendix 2

A. What is your opinion about the following statements? Check one square for each of the next 11 statements, which describe your opinion best. Use the next scale:

1. Strongly disagree
2. Disagree
3. Almost disagree
4. I can't say
5. Almost agree
6. Agree
7. Fully agree

	1	2	3	4	5	6	7
A1. Making an investment to the mutual funds I expect get a good return…….……………………………………..…	☐	☐	☐	☐	☐	☐	☐
A2. Making an investment to the mutual funds I expect to make a safe investment…………………………………………………………..	☐	☐	☐	☐	☐	☐	☐
A3. Making an investment to the mutual funds I expect to make an investment, which is easy to liquidate……………….………...…	☐	☐	☐	☐	☐	☐	☐
A4. Making an investment to the mutual funds I expect to make it easily………………………...…………………..…	☐	☐	☐	☐	☐	☐	☐
A5, Making an investment to the mutual funds I expect to make an investment, which will stay in the OP-banking group……………	☐	☐	☐	☐	☐	☐	☐
A6. My family or my closest think that investment to the mutual funds is a good investment…………………….……………..…..	☐	☐	☐	☐	☐	☐	☐
A7. My closest friends or my colleagues think that investment to mutual funds is a good investment……………...………………..	☐	☐	☐	☐	☐	☐	☐
A8. The scientific knowledge, which recommends to invest in the domestic mutual funds, has influence on my decisions….……….	☐	☐	☐	☐	☐	☐	☐
A9. I will make a mutual fund investment in some mutual funds in the future……….…………………………….…..………	☐	☐	☐	☐	☐	☐	☐
A10. I will make an additional investment in the same mutual funds in the future……….……………………………..……..…	☐	☐	☐	☐	☐	☐	☐
A11. Most of my closest and important people think that it is good for me to invest in the mutual funds.………………………..……	☐	☐	☐	☐	☐	☐	☐

Answer also the next questions:

A12. The personnel of the bank have recommended mutual funds as a good investment

Many times	Sometimes	Once	Never	I don't know:
☐	☐	☐	☐	☐

A13. I make a mutual fund investment, if I understand the function and terms of the financial markets

Fully agree	Agree	I can't say	Disagree	Strongly disagree
☐	☐	☐	☐	☐

A14. In my view I understand the financial markets

Excellent	Well	Satisfactory	Not very well	Poorly
☐	☐	☐	☐	☐

(*Continued*)

Figure A2.
Questionnaire for the mutual fund investors

B. How important do you find the next statements? Check one square for each of the next 10 statements, which describe your opinion best. Use the next scale:

1. Not important at all
2. Very little important
3. Little important
4. I can't say
5. Quite important
6. Important
7. Very important

		1	2	3	4	5	6	7
B1.	Getting a good return is to me……………………………………	☐	☐	☐	☐	☐	☐	☐
B2.	Having a safe investment is to me……………………………….	☐	☐	☐	☐	☐	☐	☐
B3.	Easy liquidation of my investment is to me…………………....	☐	☐	☐	☐	☐	☐	☐
B4.	Easy investment without problems is to me……………….…...	☐	☐	☐	☐	☐	☐	☐
B5.	Investing in the OP-group of banking is to me……………..….	☐	☐	☐	☐	☐	☐	☐
B6.	Taking into account the opinion of my family is to me.. ………..	☐	☐	☐	☐	☐	☐	☐
B7.	Taking into account the opinion of my colleagues is to me...…...	☐	☐	☐	☐	☐	☐	☐
B8.	Taking into account the recommendations of the scientific knowledge is to me………………………………………………	☐	☐	☐	☐	☐	☐	☐
B9.	Taking into account the recommendations of the bank personnel is to me………………………………………………………	☐	☐	☐	☐	☐	☐	☐
B10.	Making an investment in the OP-mutual funds is to me………....	☐	☐	☐	☐	☐	☐	☐

Answer the next questions:

B11. Making an investment in mutual funds is to me

Very rewarding	Rewarding	Somewhat rewarding	Poorly rewarding	Very poorly rewarding
☐	☐	☐	☐	☐

B12. Making an investment in mutual funds is to me

Very pleasant	Pleasant	No difference	Unpleasant	Very unpleasant
☐	☐	☐	☐	☐

B13. Estimate your total satisfaction with your choice as OP-mutual funds

Very satisfied	Satisfied	No difference	Dissatisfied	Very unsatisfied
☐	☐	☐	☐	☐

C. Answer also the next background variables:

C1. I am a
- ☐ male
- ☐ female

C2. My age is
- ☐ 18-25
- ☐ 26-35
- ☐ 36-45
- ☐ 46-55
- ☐ 56-65
- ☐ over 65

C3. My education is
- ☐ University level
- ☐ Polytechnic level
- ☐ College level examination
- ☐ Professional school
- ☐ Secondary school
- ☐ Elementary school

Figure A2.

(Continued)

C4. I am living in the area in a
- ☐ Urban city area of over 50,000 inhabitants
- ☐ City less than 50,000 inhabitants
- ☐ Municipality centre, not city
- ☐ Rural area, not city

C5. My role in making investment decisions
- ☐ I make all decisions
- ☐ I participate in the investment decisions in our household
- ☐ I do not participate in the investment decisions

C6. I have been a client in the OP-bank
- ☐ never
- ☐ less than a year
- ☐ 1-5 years
- ☐ 5-10 years
- ☐ 10-15 years
- ☐ 15-20 years
- ☐ over 20 years

C7. I have had an investment in OP-mutual fund
- ☐ less than a year
- ☐ 1-3 years
- ☐ 3-6 years
- ☐ 6-10 years
- ☐ over 10 years

C8. I have invested in the OP-mutual fund
- ☐ less than 1,000 euros
- ☐ 1,000-5,000 euros
- ☐ 5,001-10,000 euros
- ☐ 10,001-15,000 euros
- ☐ 15,001-20,000 euros
- ☐ over 20,000 euros

C9. I have invested in the OP-mutual fund
- ☐ just once
- ☐ 2 times
- ☐ 3 times
- ☐ 4 times
- ☐ 5-10 times
- ☐ over 10 times

C10. The most important source, which influenced my investment
- ☐ I have studied finance in school
- ☐ I have got acquainted with finance in my job
- ☐ I have taught myself from magazines, internet etc.
- ☐ I have heard about investment from my friends
- ☐ I have followed investment programmes on TV
- ☐ From the investment club of a bank or other institution
- ☐ My contact person in the bank has told about investment
- ☐ I am a member of the Tax Payers' Union or/and Shareholders' Union

C11. I have investments in
- ☐ Basic deposit
- ☐ Bonds
- ☐ In other mutual funds than in OP-funds
- ☐ Insurance savings
- ☐ Shares in stock exchange
- ☐ Shares outside stock exchange
- ☐ Investment in real estates
- ☐ Investments in apartments
- ☐ Investments in forests

Figure A2.

About the authors

Antti Pellinen is an entrepreneur in his own consulting company. He has over 20 years' experience in life insurance and fund business. The main research area is financial capability. Antti Pellinen is the corresponding author and can be contacted at: pellinen@pp.phnet.fi

Kari Törmäkangas is Adjunct Professor and the Head of the Methodological Department of the Educational Research Institute. His main research area is the item response theory, path models and fundamental statistical methods.

Outi Uusitalo is Professor in Marketing at the University of Jyväskylä. Her research activity has focused on consumer behaviour, retail management, and ethical issues in marketing.

Anu Raijas is Adjunct Professor and Head of Research in the National Consumer Research Centre. Her research interests have recently focused on financial behaviour within households.

Financial services and consumer protection after the crisis

Folarin Akinbami
Durham University, Durham, UK

Received April 2010
Revised August 2010
Accepted September 2010

Abstract

Purpose – The purpose of this paper is to examine the approaches to consumer protection in UK financial services before and after the global financial crisis.

Design/methodology/approach – This paper reviews the literature on behavioural economics and psychology, and uses it as the basis for a critique of the UK's approach to the supervision of financial services firms and the protection of their consumers.

Findings – Non-interventionist approaches to consumer protection, which are based on the traditional theories of the law and economics movement, have failed. As a result, there is now a shift in thinking towards more interventionist approaches.

Research limitations/implications – By understanding the likely impact of the regulatory reforms the academic research community can assist the regulator to understand the best way to ensure desirable outcomes for users (consumers) of financial services.

Originality/value – The moves to reform UK financial regulation after the crisis have only recently got under way and a lot of the reforms have not been widely debated or written on.

Keywords Consumer protection, Consumer behaviour, Financial services

Paper type Conceptual paper

Introduction

The global financial crisis of 2007-2009 is, arguably, the most significant financial crisis to occur since the Great Crash of 1929, which led to the Great Depression. The crisis of 2007-2009 was caused by a number of factors for example flawed monetary policy, excessive and uncontrolled use of financial innovation, the proliferation of shadow banking activities and inadequate corporate governance structures within banks and other financial services firms (Avgouleas, 2009). To a large extent, it was also a manifestation of regulators' failure to maintain the overall stability of the financial system. Apart from this failure to maintain systemic stability, there were also some failures to protect consumers, for example regulators' approaches to the supervision of financial firms were not assertive enough thus resulting in a situation where a large number of borrowers are struggling to pay back mortgages as a result of irresponsible lending.

Apart from this there have been other examples of financial practitioners acting in a way that was detrimental to consumers, for example the scandals arising from the

This paper is based on research carried out during the author's PhD. The author is greatly indebted to Professor Andrew McGee and Mr Andrew Griffiths for very constructive comments on the earlier draft. The author would also like to thank his PhD examiners, Professor Joanna Gray and Professor Emilios Avgouleas, for their thorough critique and examination of the thesis. In addition, the author would like to thank the two anonymous reviewers for their constructive comments.

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
pp. 134-147

0265-2323
DOI 10.1108/02652321111107620

mis-selling of retail financial products such as personal pensions and endowment mortgages (Gray, 2004). Such incidents illustrate how firms and practitioners in the financial services industry are able to exploit an unfair advantage they have over their consumers (investors) in terms of superior information and expertise. Such opportunistic behaviour, arguably, indicates the need for tighter regulation of financial services.

This article looks at some of the principal theories on why we intervene, in markets, to protect consumers. It also looks at how the financial crisis has led to a re-thinking of how this might be done. In so doing, it examines the regulatory philosophies that underpinned consumer protection regulation in UK financial services before the crisis, as well as the new ideas that might replace them in the new post-crisis era.

Approaches to consumer protection regulation

The government or regulator tasked with consumer protection will often have to balance the interests of consumers on the one hand with those of the sellers or suppliers on the other hand. To this extent, its approaches to consumer protection regulation will be interventionist, non-interventionist or a mixture of both. The non-interventionist and interventionist approaches to consumer protection will now be discussed in turn.

Non-interventionist approaches

Non-interventionist approaches emphasize allowing the consumers and sellers the freedom to make bargains and contracts without external interference from government or regulators. The non-interventionist approaches are promotion of competition (between the different suppliers or sellers) (Yeung, 2004), the use of information disclosure (Howells, 2005), the use of *caveat emptor* (McMeel and Virgo, 2001) and the reliance on private enforcement mechanisms (Polinsky and Shavell, 2000; Shavell, 1993; Van Den Bergh, 2008).

The "Chicago School" of economic thought has traditionally been a supporter of non-interventionist approaches. Their arguments are based on a deep-seated belief in the efficacy of the free market as a means of organising or allocating resources (Friedman, 1974). They are also founded on a great deal of scepticism of government intervention in economic affairs (Friedman, 1974). The argument is that in the absence of government intervention the free market functions at least as well as, and probably better than, any other type of economic arrangement (Friedman and Friedman, 2002; Wall, 1972). The reason for this, according to Chicagoans, is that voluntary exchange is the most efficient method of allocating resources, promoting individual choice and preserving political freedoms (Friedman and Friedman, 2002).

This belief in free markets, minimal government and the promotion of private enterprise is, in turn, founded on the proposition that human beings maximise their own self-interests and are therefore rational economic creatures (Stigler, 1982). This is known as rational choice theory. Rational choice theory is, in many ways, the foundation for the law and economics movement (Jacoby, 2000). It is based on the premise that human beings are maximisers of their satisfaction, or utility, and that when faced with a set of choices, will always pick the option that they believe maximises their satisfaction or utility (Becker, 1978; Posner, 1990). This premise is, in turn, based on the assumption that when making choices people have adequate information (to aid them in making those choices) and the ability to properly process that information (Ogus, 1994). Consequently individual choice must be preserved, while limiting external or government interference (in individual's decision-making about their welfare) to the improvement of information flows (Ogus, 1994). Rational choice theory, therefore, seems to argue for limited, if any, regulation or other government intervention, since individuals know how to maximise their utility and are capable of doing so.

A major criticism of non-interventionist approaches arises from a significant defect of rational choice theory. This criticism can be found in the behavioural economics and psychology literature. The problem with rational choice theory is that people do not always make rational choices. Individuals can, and do, make inferior decisions with regards to their welfare-decisions that they would not have made if they had complete information, unlimited cognitive abilities and unlimited self-control (Jolls *et al.*, 1998). This arises because people often use heuristics (rules of thumb) which are aimed at making complex tasks, of assessing probabilities and predicting values, simpler, but which can sometimes lead to severe and systematic errors (Avgouleas, 2008). There is a wealth of empirical studies, in both behavioural economics and psychology, that show that the use of heuristics, such as the availability heuristic (Slovic, 2000) and the affect heuristic (Slovic *et al.*, 2004), results in cognitive biases (cognitive weaknesses) in individuals' decision-making, which, in turn, lead them to make systematic errors (Tversky and Kahneman, 1974). Some examples of cognitive biases are overconfidence (Shiller, 2000), probability neglect (Sunstein, 2005) and loss aversion (Kahneman and Tversky, 1979; Kahneman *et al.*, 1990; Kahneman and Knetsch, 1991). Individuals, thus, suffer from bounded rationality (Jolls *et al.*, 1998; Simon, 1955), bounded self-control (Frederick *et al.*, 2002; Jolls *et al.*, 1998) and the effect of framing (Camerer, 2000; Johnson *et al.*, 2000) when making choices regarding their welfare.

Interventionist approaches

Interventionist approaches to consumer protection are characterised by the greater involvement of government or regulators in the monitoring of suppliers and sellers of goods and services in a bid to protect the interests of consumers. Typical interventionist approaches include bans and regulation, altering the default rules and risk-sharing (Howells, 2005). Interventionist approaches in financial services include conduct of business regulation and product regulation.

A significant justification for interventionist approaches comes from the extensive scholarly empirical literature on the behaviour of individual consumers, which concludes that rational choice theory is a simplistic theory that has little correspondence with the real world (Jacoby, 2000; Jacoby *et al.*, 1998; Peter and Olson, 2008). Human behaviour is a complex function of many known and unknown factors, and although economic variables play an important role in our choices, there are many other variables which also play a role in our choices, for example psychological, sociological, cultural and environmental variables (Jacoby, 2000). The upshot of this is that the application of rational choice theory will not work for all markets and all consumers all of the time or in all situations (Jacoby, 2000).

Another significant justification for interventionist approaches to consumer protection is information inadequacy. Information is necessary in order for markets to function properly- for a market to function well buyers must have enough information to help them evaluate products (Hayek, 1945), and there should be as much information available as consumers are willing to pay for in order to improve the quality of their choices (Breyer, 1982). This is, however, not always the case, for a number of reasons.

The first of these reasons is that information is sometimes expensive to produce and difficult to restrict to only those who pay (Breyer, 1982), therefore there is less of an incentive to produce such information (Asch, 1988). This can lead to the production of inadequate or too little information (Sunstein, 1990), and thus constitutes an argument in favour of regulation.

The second reason is that one of the parties to a transaction may deliberately try to mislead or deceive the other party, by conveying false information or omitting important facts – the fact that individual consumers will often have incomplete information, coupled with the significant costs involved in determining the quality of a particular good or service, create favourable conditions for fraud to take place (Darby and Karni, 1973). Although there are other ways of dealing with this particular problem, for example service contracts, leasing arrangements, extensive warranties, client relationships and branding (Darby and Karni, 1973), regulation should not be ruled out.

The third reason is that even if the necessary information is provided the buyer may be unable to evaluate all the characteristics of the products or services on offer, for example a lay man cannot readily evaluate the competence of a doctor or lawyer (Breyer, 1982). The result of such information asymmetries between buyers and sellers (where the sellers have more knowledge about the quality of the goods on sale than the buyer) is often described as a "market for lemons" (Akerlof, 1970). In a market for lemons there is an incentive for sellers to market poor quality merchandise because the returns for good quality accrue to all sellers rather than to the individual seller (Akerlof, 1970). The market will, therefore, supply quality at inefficiently low levels (Cheffins, 1997). Although there are other ways of dealing with the market for lemons (that is, the effects of quality uncertainty) for example the use of guarantees and brand-names, there is still a strong case for licensing and other forms of regulation, in order to increase the welfare of all parties (Akerlof, 1970).

The problem of quality uncertainty is particularly relevant with regards to experience goods rather than search goods (Nelson, 1970). With search goods there is less danger the buyer will make incorrect purchase decisions because the relevant characteristics can be known prior to purchase, whereas with experience goods there is a greater likelihood of unsuitable purchases because the relevant characteristics will often only be ascertainable after purchase and use (Breyer, 1982). The problem of quality uncertainty is also relevant with regard to credence goods because it is difficult to ascertain their characteristics or their quality even after they have been used or consumed. The problem of quality uncertainty is, therefore, particularly relevant to banking and other financial services because long-term savings and investment products tend to be credence goods rather than search or experience goods. The problem of quality uncertainty thus contributes positively to the argument in favour of regulation.

The fourth reason why there might be inadequate information in a market is that the market may simply not be competitive enough to provide all the information that consumers would be willing to pay for, for example until the US government mandated disclosure, accurate information was unavailable, to most buyers, regarding the fuel economy for cars, durability of light bulbs, nicotine content of cigarettes or care requirements for textiles (Breyer, 1982).

Having looked at the four reasons it is clear that information inadequacy poses a very strong justification for regulation. By making information more extensively available, accurate and affordable, regulation can protect buyers against the adverse consequences of information inadequacy thus encouraging the operation of healthy markets (Baldwin and Cave, 1999). To this extent regulation is a desirable thing.

Morality presents another justification for interventionist approaches to consumer protection. This is because capitalism itself encourages the baser human motives such as self-interest and the desire for personal profit, while at the same time discouraging the more traditional moral virtues such as honesty, integrity, self-sacrifice and the charitable instinct (Barry, 1991). Thus, if an unregulated market is likely to produce self-serving conduct which breaches widely accepted standards of morality, then there could be an argument made for the introduction of regulation into such a market (Cheffins, 1997).

In attempting to curb conduct that breaches widely accepted standards of morality, regulation can also promote confidence in the market, since unethical or improper conduct is precisely the thing that undermines public confidence in the market (Barry, 1991; Cheffins, 1997). Morality thus provides a good justification for regulation.

A further justification for interventionist approaches is paternalism. It is largely based on the weaknesses of rational choice theory. The perceived inability of individuals to make correct choices with regards to their welfare is a justification for regulation that is paternalistic in nature – such regulation is based, largely, on the belief that the market is unable to regulate itself in a particular area of social or economic activity, thus requiring government initiatives that are interventionist in nature (Avgouleas, 2005). Paternalism itself has been defined as "the interference with a person's liberty of action justified by reasons referring exclusively to the welfare, good, happiness, needs, interests or values of the person being coerced" (Dworkin, 1971; Ogus, 2010; Van De Veer, 1986). It is a powerful justification for regulation, even when other justifications, such as externalities, are also appropriate (Ogus, 1994), and it has even been argued that, very often paternalism is inevitable (Sunstein and Thaler, 2003).

The problem with paternalism is that it is viewed by some, especially libertarians, as coercive, restrictive on choice and freedom and it blurs the boundaries of state intervention (Friedman and Friedman, 2002; Hayek, 1960; Hayek, 1973; Nozick, 1974). To overcome the criticisms of paternalism, Sunstein and Thaler have come up with the idea of libertarian paternalism (Sunstein and Thaler, 2003). They argue that arguments against paternalism are based on a false assumption (that people always make choices that are in their best interests) and misconceptions that there are viable alternatives to paternalism and that paternalism always involves coercion (O'Donoghue and Rabin, 2003; Sunstein and Thaler, 2003). Libertarian paternalism is a fairly weak and non-intrusive version of paternalism, whereby choices are not blocked but planners self-consciously attempt to move people in welfare-promoting directions (Sunstein and Thaler, 2003), thus making the regime both libertarian and paternalistic at the same time.

A good look at some of the things that paternalistic regulation has been put in place to avoid, for example under-aged smoking and drinking and the failure to wear seatbelts (Dworkin, 1971), makes it clear to us that individuals, if left to their own devices, do not always make rational decisions or welfare-maximising choices. This therefore counts as a good justification for intervention in order to ensure their welfare.

Consumer protection in the financial industry before the crisis

The regulatory objectives

UK financial regulation in the run-up to the financial crisis was (and remains) a mixture of both interventionist and non-interventionist approaches. The UK financial regulator, the FSA, has four statutory objectives (which can be found in the Financial Services and Markets Act 2000 (FSMA)) and these are the protection of consumers (of financial products and services), maintaining confidence in the financial system, reducing financial crime and promoting public understanding of the financial system (FSMA sections 2(2) and 3). Consumer protection is therefore one of the main aims of UK financial services regulation, and the regime contains measures aimed at ensuring consumers have adequate protection when dealing with financial services providers (FSMA Parts 15 and 16). The fact that consumer protection is explicitly outlined as one of the regulatory objectives makes it one of the central aims of the regime and this is definitely desirable.

The multiple objectives of the regulator could, however, be problematic, since there is the potential for confusion with regards to how to prioritise the different objectives. Some statutes set out objectives that are mutually at odds with each other, and achieving one of such objectives may necessarily involve trading off performance in relation to other stated objectives (Baldwin and Cave, 1999). Regulatory scholars often fail to pay enough attention to the ideological differences which underpin law or regulation, because rather than focus on the differences between regulatory goals they focus on the differences between compliance strategies (Haines and Gurney, 2003).

The FSA's stated objectives might not initially appear to be mutually at odds with each other, but on a closer examination, it is possible to observe subtle, but significant ideological and policy differences among some of its objectives. The potential for conflict between its goal of protecting consumers and its goal of educating consumers (promoting public understanding of the financial system) provides a good illustration of this. The statutory objective of protecting consumers reflects the idea that regulation should protect consumers because of information asymmetry, the fact that individuals do not always make rational choices (the failures of rational choice theory) and the fact that unregulated markets are likely to produce self-serving conduct which breaches acceptable standards of morality. This is essentially an interventionist approach based on the traditional justifications for using interventionist approaches. This provision for consumer protection can be contrasted with two other provisions in the statute. The first of these is a proviso to the consumer protection objective, which states that consumers must accept personal responsibility for their decisions (FSMA section 5(2)(d)). The second is the statutory objective of promoting public understanding of the financial system, which is premised on the idea that if consumers can be "educated" they can be empowered, and will thus be able to look after their own interests, thereby reducing the need for interventionist approaches to consumer protection (FSMA sections 2(2)(b) and 4). It is based on rational choice theory and incorporates non-interventionist approaches such as information disclosure and *caveat emptor*.

There is a strong argument for caution when using information disclosure to make consumers responsible for their decisions, since the effectiveness of information disclosure as a regulatory technique to empower consumers may be limited (Gray and Hamilton, 2006). *Caveat emptor* is also problematic because it amounts, in effect, to abandoning consumers to their fate. It is, therefore, suggested that when a decision is being made about which objective to give priority to, the regulator should give the consumer protection objective priority over the objective of promoting public understanding of the financial system.

Supervision of the financial services industry

The supervision of the financial services industry has, to date, been based on a number of key ideas. These are risk-based regulation, more principles-based regulation (MPBR), "light-touch" regulation, the enrolment of consumers into the regulatory process and the encouragement of firms to treat their customers fairly. Risk regulation deals with the management of regulatory or institutional risks for example risks that the regulator will not achieve its objectives as a result of the misbehaviour of the regulated firms (Black, 2005). This approach potentially gives the regulator very wide powers to do whatever is necessary to tackle any issues that arise which pose a risk to it attaining its objectives.

More principles-based regulation (MPBR) is based on greater reliance on outcomes-focused, broad rules (which are known as principles) and less reliance on detailed, specific rules (FSA, 2007a). The regulator uses 11 over-arching principles, which are of a highly general nature, and apply to all firms performing regulated activities in the UK (FSA Handbook PRIN 1.1). They provide a general guide on how the regulated firms should behave, for example the sixth principle requires firms to pay regard to the interests of their customers and to treat them fairly (FSA Handbook PRIN 2.1.1). Apart from the principles, there is a second layer of rules, which are more detailed and which deal with specific matters, such as conduct of business and the persons subject to regulation under the regime. The principles and detailed rules represent a more interventionist approach to the protection of financial services consumers, and are therefore desirable. Prioritising the principles over the detailed rules is also desirable because they are broader in scope than the detailed rules.

The third key idea that has influenced the way in which the UK financial industry has been supervised is the idea of "light touch" regulation. This is characterised by the implementation of the supervisory regime in a business-friendly manner. It is also characterised by reluctance, on the part of the regulator, to interfere with how firms conduct their business, for example reluctance to review firms' business models or to take a tough stance with them. It is non-interventionist, and has been considered a key factor in the regulatory failings that contributed to the financial crisis (Sants, 2010). To this extent, it serves as a good illustration of how non-interventionist approaches fail to deliver on regulatory objectives such as the protection of consumers.

The enrolment of consumers into the regulatory process is another key idea that has influenced the regulator's attitude to the supervision of UK financial services. Enrolment is the natural progression from decentred regulation, which is, in turn, based on the idea that governments do not have a monopoly on regulation, and that regulation occurs within and between other social actors with or without the government's involvement or approval (Black, 2001). These other actors will be "enrolled" into the regulatory process implicitly or explicitly, and will play a part in shaping the regulation. One group of such social actors is consumers, and they are enrolled into the regime based on the requirements that the regulator educates consumers (FSMA section 4) and encourages them to take responsibility for their decisions (FSMA section 2(3)(c)). Enrolment, therefore, embodies the notion of *caveat emptor* (Davies, 2000; McMeel and Virgo, 2001), and is therefore a non-interventionist approach to consumer protection. Applying *caveat emptor* to financial services supervision is problematic because it amounts to abandoning vulnerable consumers to their fate. If consumers suffer from cognitive biases, and need regulation in order to protect them, strategies of enrolment which make the consumers the *de facto* regulators ultimately do not make sense.

Encouraging firms to treat their customers fairly is another key idea in the supervision of UK financial services. This is done through the treating customers fairly (TCF) initiative, which is largely based on the FSA's principles, particularly principle 6, which requires firms to pay regard to the interests of their customers and to treat them fairly (FSA Handbook PRIN 2.1.1). Under the initiative the regulator set firms six outcomes to achieve in terms of consumer protection which include, for example, the suitability of advice provided to consumers and the provision of products and services to an acceptable standard (FSA, 2007b). The TCF initiative aims to bring about positive changes in the way that financial firms treat their customers, thereby delivering better outcomes for consumers (Waters, 2006). This approach has been largely non-interventionist, with the regulator giving the regulated the tools to improve their approaches towards consumers but leaving the actual implementation of such improvements to the firms and their senior managements (Wilson, 2007). Under such a non-interventionist approach the firms did make some progress but there is still considerable room for improvement (FSA, 2007c; Wilson, 2007). There is therefore much more to be done with regard to improving the way firms treat their customers.

Consumer protection in the financial industry after the crisis

The effects of the financial crisis have been felt in many parts of the world and have been very severe indeed. They have led to some substantial changes in the way the UK financial services industry is regulated, with potentially significant consequences for its consumers. The first change is a change in the FSA's philosophy and its approach to supervision. The second, and more significant change, is the new UK coalition government's plan to put in place a new financial regulation regime, that will see the FSA phased out in 2012, and its functions carried out by the Bank of England and a number of new regulators. These two changes will now be discussed in some detail.

The change in the FSA's philosophy and approach to supervision

The FSA has carried out reviews looking into the causes of the crisis (FSA, 2008; Turner, 2009) and consultations on how to improve the regulation of UK financial services after the crisis (FSA, 2009; FSA, 2010). It has acknowledged the failure of its non-interventionist approaches, and has signalled its intention to change its approach to one that is more interventionist, intrusive and proactive (Sants, 2009). This involves some changes in its philosophy and its approach to supervision.

In its review of the supervision of Northern Rock it concluded that the way it implemented risk regulation may have been incorrect, but that risk regulation works in theory (FSA, 2008). The idea of risk regulation, therefore, remains key to its supervisory approach, with the regulator reiterating its stance that it is not feasible to try and prevent all failures (FSA, 2008). It will therefore continue to mitigate risks while at the same time fostering innovation and competition.

The idea of more principles-based regulation has been replaced with "outcomes-focused" regulation. Although the principles have been left intact the approach towards their application is slightly different. Outcomes-focused regulation is centred on intervening in a proactive way, and judging the future decisions of firms based on business model and other analysis (Sants, 2010). This represents a more proactive and rigorous approach to supervision. It is interventionist and is, arguably, a better way to protect consumers.

The idea of "light touch" regulation has probably been the biggest casualty of the financial crisis. It had already been criticised before the crisis, and is considered a key contributor to the regulatory failings that contributed to the crisis (Sants, 2010). As a result, the regulator has decided to do away with it, and to replace it with the idea of intensive supervision. Intensive supervision involves greater attention to consumer outcomes, as well as more intrusive inspections and mitigation of the risks inherent in firms' business models (Sants, 2009). It also involves identifying and encouraging the right culture within the industry (Sants, 2009), thus showing that the regulator is beginning to understand how important it is that the culture of putting consumers first is encouraged. It also involves a greater willingness to take a tougher stance with firms and to take enforcement action against them where appropriate. Intensive supervision is a very interventionist approach to supervision, and is beneficial to consumers because it puts their interests high up on the regulatory agenda.

Intensive supervision, however, does not fit in perfectly with the idea of enrolment of consumers into the regulatory process. Enrolment remains part of the regulator's overall supervisory strategy and is comprised of enlightening or empowering consumers, on the one hand, and *caveat emptor*, on the other hand. Although enlightened or empowered consumers will complement attempts to implement intensive supervision, the same cannot be said of *caveat emptor*. It is difficult to see how *caveat emptor* can be reconciled with intensive supervision. This means that there remains the potential for non-interventionist approaches, such as *caveat emptor*, to reduce the effectiveness of interventionist approaches.

The idea of treating customers fairly remains firmly on the regulator's agenda for the supervision of firms. The regulator accepts that the TCF initiative has not delivered the outcomes that consumers deserve, largely as a result of its implementation in a non-interventionist, reactive manner (Sants, 2009, 2010). It has consulted on ways to improve professionalism within the industry (FSA, 2009) and the way firms handle consumer complaints (FSA, 2010). It has also re-focused the TCF initiative towards making the retail market work better for consumers, avoiding the crystallisation of conduct risks and delivering credible deterrence, and prompt and effective redress for consumers (Sants, 2010). This re-focusing represents a welcome shift away from non-interventionist approaches, and a desirable move towards interventionist approaches to consumer protection.

The new financial regulatory regime to replace the FSA

The new coalition government in the UK has decided to get rid of the FSA and to split its responsibilities between the Bank of England and a new financial services consumer protection agency (currently being referred to as the Consumer Protection and Markets Authority (CPMA)). In this new regime the Bank of England will be responsible for the overall financial stability of the UK financial system, in addition to its already existing responsibility for monetary policy. To help it with this, a new prudential supervisory body (currently being referred to as the Prudential Regulatory Authority (PRA)) will be created, which will be tasked with ensuring that banks and other financial services firms are financially sound (Masters, 2010; Osborne, 2010; Treasury, 2010). In addition, a new Financial Policy Committee (FPC) will also be created, with the remit to prevent dangerous build-ups of credit or asset bubbles in the economy (Osborne, 2010; Parker and Masters, 2010; Treasury, 2010).

The consumer protection responsibility of the FSA will be transferred to the new consumer protection agency, which will be tasked with regulating the conduct of all financial services firms (including how products and services are sold to consumers) (Ross, 2010) and ensuring the integrity of the UK's financial markets (Elliott, 2010).

An apparent advantage of this new institutional structure is that it brings the regulatory regime more in line with the "Twin Peaks" model of financial regulation, advocated by Taylor (1995) and currently in use in Australia. This model is advantageous because it advocates putting one regulator in charge of prudential supervision and another in charge of regulating the business conduct of financial firms, thus avoiding a situation where a regulator is confused as to which objective to prioritise (Taylor, 1995).

The second supposed advantage of the new institutional structure is that it satisfies the need to bridge the gap between macro-prudential policy, on the one hand, and micro-prudential policy, on the other hand (Elliott, 2010; King, 2010). This has been described as necessary because "monetary stability and financial stability are two sides of the same coin" (King, 2010).

There are, however, a number of criticisms that can be made of the new changes, even at this early stage. The first is that the changes do not address one of the most significant factors that must be taken into account in any attempt to improve financial regulation – the need for robust supervision and implementation of regulatory objectives. It can be argued that the institutional structure or organisational structure is only one factor in achieving good regulation, and that other potentially more important factors are the quality and ability of the regulator's staff (Masters, 2010; Parker and Masters, 2010). Altering the institutional structure of the regulatory regime without addressing the fundamental problems of flawed regulatory philosophy and inadequate supervision by the regulator is unlikely to generate significant improvements in the regulation of UK financial services.

The second criticism relates to consumer protection in particular – the coalition government appears to have given very little consideration to how the new consumer protection agency will carry out its consumer protection functions. It has, for example, been argued that putting the market integrity responsibility alongside the consumer protection function appears to be merely an afterthought (Parker and Masters, 2010), thus giving the impression that both consumer protection and maintaining market integrity are not considered, by the coalition government, to be as important as prudential supervision of the financial system.

The third criticism is that the coalition government has also failed to clarify what the regulatory philosophy of the new consumer protection agency will be – if it carries on with the FSA's new philosophy of intensive supervision then it will be more interventionist in its approach, and this will potentially be advantageous for consumers of UK financial products and services. If, on the other hand, it adopts neo-classical economic ideas that Conservative governments adopted in the past then it will rely on non-interventionist approaches such as information disclosure, *caveat* emptor and the promotion of competition, and this could potentially be disadvantageous for consumers of UK financial products and services.

Conclusion

This paper has examined the approaches to consumer protection in UK financial services. It has used the literature on behavioural economics and psychology as the basis for a critique of the UK's approach to consumer protection in the area of financial services. This literature shows that, contrary to the belief, in neo-classical economics, that people make rational choices, individuals in fact do not always make rational choices. The use of heuristics results in cognitive weaknesses in individuals' decision-making, leading them to make inferior decisions with regard to their welfare. This suggests that interventionist approaches to consumer protection are preferable to non-interventionist ones, because they take into account the fact that individuals' decisions are not always rational or in their best interests. Other factors that support the argument that interventionist approaches are better than non-interventionist ones include the problem of information inadequacy, the existence of information asymmetry between sellers (suppliers) and buyers (consumers), the problem of lack of competition (among sellers or suppliers of financial services products) and the potential for fraud or deception.

The FSA has taken steps to improve its overall approach to supervision, and its approach to consumer protection has become more interventionist. The fact that the FSA will be replaced in the near future does, however, throw up questions regarding what the approach to consumer protection in UK financial services will be in the future. The failure of non-interventionist approaches in the recent past does, however, show that future efforts at consumer protection in financial services ought to be more interventionist in nature rather than non-interventionist.

References

Akerlof, G.A. (1970), "The market for 'lemons': quality uncertainty and the market mechanism", *Quarterly Journal of Economics*, Vol. 84, pp. 488-500.

Asch, P. (1988), *Consumer Safety Regulation: Putting a Price on Life and Limb*, Oxford University Press, Oxford.

Avgouleas, E. (2005), *The Mechanics and Regulation of Market Abuse: A Legal and Economic Analysis*, Oxford University Press, Oxford.

Avgouleas, E. (2008), "Reforming investor protection regulation: the impact of cognitive biases", in Faure, M. and Stephen, F.H. (Eds), *Essays in the Law and Economics of Regulation: In Honour of Anthony Ogus*, Intersentia, Antwerpen.

Avgouleas, E. (2009), "The global financial crisis, behavioural finance and financial regulation: in search of a new orthodoxy", *Journal of Corporate Law Studies*, Vol. 9, pp. 23-59.

Baldwin, R. and Cave, M. (1999), *Understanding Regulation: Theory, Strategy, and Practice*, Oxford University Press, Oxford.

Barry, N.P. (1991), *The Morality of Business Enterprise*, Aberdeen University Press, Aberdeen.

Becker, G.S. (1978), *The Economic Approach to Human Behavior*, University of Chicago Press, Chicago, IL.

Black, J. (2001), "De-centring regulation: understanding the role of regulation and self-regulation in a 'post-regulatory' world", *Current Legal Problems*, Vol. 54, pp. 103-46.

Black, J. (2005), "The emergence of risk-based regulation and the new public risk management in the UK", *Public Law*, pp. 512-48.

Breyer, S.G. (1982), *Regulation and its Reform*, Harvard University Press, Cambridge, MA.

Camerer, C.F. (2000), "Prospect theory in the wild: evidence from the field", in Kahneman, D. and Tversky, A. (Eds), *Choices, Values, and Frames*, Cambridge University Press, Cambridge.

Cheffins, B.R. (1997), *Company Law: Theory, Structure, and Operation*, Clarendon, Oxford.

Darby, M.R. and Karni, E. (1973), "Free competition and the optimal amount of fraud", *Journal of Law and Economics*, Vol. 16, pp. 67-88.

Davies, H. (2000), *A New Regulator for the New Millennium: A Radical New Approach to Regulation*, FSA, London.

Dworkin, G. (1971), "Paternalism", in Wasserstrom, R.A. (Ed.), *Morality and the Law: Basic Problems in Philosophy Series*, Wadsworth Pub. Co., Belmont, CA.

Elliott, L. (2010), "George Osborne unveils sweeping city reforms", *The Guardian*, 16 June.

Frederick, S., Loewenstein, G. and O'Donoghue, T. (2002), "Time discounting and time preference: a critical review", *Journal of Economic Literature*, Vol. 40, pp. 351-401.

Friedman, M. (1974), "Schools at Chicago", *University of Chicago Magazine*.

Friedman, M. and Friedman, R.D. (2002), *Capitalism and Freedom*, University of Chicago Press, Chicago, IL.

FSA (2007a), *Principles-based Regulation: Focusing on the Outcomes that Matter*, FSA, London.

FSA (2007b), *Treating Customers Fairly Initiative: Progress Report*, FSA, London.

FSA (2007c), *Treating Customers Fairly: Measuring Outcomes*, FSA, London.

FSA (2008), *Internal Audit Review of the Supervision of Northern Rock*, FSA, London.

FSA (2009), *Delivering the Retail Distribution Review: Professionalism, Corporate Pensions and Applicability of RDR Proposals to Pure Protection Advice*, FSA, London.

FSA (2010), *Consumer Complaints (Emerging Risks and Mass Claims)*, FSA, London.

Gray, J. (2004), "The legislative basis of systemic review and compensation for the mis-selling of retail financial services and products", *Statute Law Rev.*, Vol. 25, pp. 196-208.

Gray, J.L.L.B. and Hamilton, J. (2006), *Implementing Financial Regulation: Theory and Practice*, John Wiley & Sons, Chichester.

Haines, F. and Gurney, D. (2003), "The shadows of the law: contemporary approaches to regulation and the problem of regulatory conflict", *Law and Policy*, Vol. 25, pp. 353-80.

Hayek, F.A. (1945), "The use of knowledge in society", *American Economic Review*, Vol. 35, pp. 519-30.

Hayek, F.A.V. (1960), *The Constitution of Liberty*, Routledge & Kegan Paul, London.

Hayek, F.A.V. (1973), *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy*, Vol. 1, Routledge, London.

Howells, G. (2005), "The potential and limits of consumer empowerment by information", *Journal of Law and Society*, Vol. 32, pp. 349-70.

Jacoby, J. (2000), "Is it rational to assume consumer rationality? Some consumer psychological perspectives on rational choice theory", *Roger Williams University Law Review*, Vol. 6, pp. 81-162.

Jacoby, J., Johar, G.V. and Morrin, M. (1998), "Consumer behavior: a quadrennium", *Annual Review of Psychology*, Vol. 49, pp. 319-44.

Johnson, E.J., Hershey, J., Meszaros, J. and Kunreuther, H. (2000), "Framing, probability distortions and insurance decisions", in Kahneman, E.J., Tversky, A. and Russell Sage, F. (Eds), *Choices, Values, and Frames*, Cambridge University Press, Cambridge.

Jolls, C., Sunstein, C.R. and Thaler, R.H. (1998), "A behavioural approach to law and economics", *Stanford Law Review*, Vol. 50, pp. 1471-550.

Kahneman, D. and Knetsch, J.L. (1991), "The endowment effect, loss aversion, and *status quo* bias", *Journal of Economic Perspectives*, Vol. 5, pp. 193-206.

Kahneman, D. and Tversky, A. (1979), "Prospect theory: an analysis of decision under risk", *Econometrica*, Vol. 47, pp. 263-92.

Kahneman, D., Knetsch, J.L. and Thaler, R.H. (1990), "Experimental tests of the endowment effect and the Coase theorem", *Journal of Political Economy*, Vol. 98, pp. 1325-48.

King, M. (2010), *Governor's Speech at the Annual Mansion House Dinner*, Mansion House, London.

McMeel, G. and Virgo, J. (2001), *Financial Advice and Financial Products: Law and Liability*, Oxford University Press, Oxford.

Masters, B. (2010), "Shaping change will be complex", *Financial Times*, 16 June.

Nelson, P. (1970), "Information and consumer behavior", *Journal of Political Economy*, Vol. 78, pp. 311-29.

Nozick, R. (1974), *Anarchy, State and Utopia*, Basic Books, New York, NY.

O'Donoghue, T. and Rabin, M. (2003), "Studying optimal paternalism, illustrated by a model of sin taxes", *American Economic Review*, Vol. 93, pp. 186-91.

Ogus, A.I. (1994), *Regulation: Legal Form and Economic Theory*, Oxford University Press, Oxford.

Ogus, A. (2010), "The paradoxes of legal paternalism and how to resolve them", *Legal Studies*, Vol. 30, pp. 61-73.

Osborne, G. (2010), *Chancellor's Speech at the Annual Mansion House Dinner*, Mansion House, London.

Parker, G. and Masters, B. (2010), "Osborne abolishes FSA and boosts bank", *Financial Times*, 16 June.

Peter, J.P. and Olson, J.C. (2008), *Consumer Behavior and Marketing Strategy*, McGraw-Hill, London.

Polinsky, A.M. and Shavell, S. (2000), "The economic theory of public enforcement of law", *Journal of Economic Literature*, Vol. 38, pp. 45-76.

Posner, R.A. (1990), *The Problems of Jurisprudence*, Harvard University Press, Cambridge, MA.

Ross, A. (2010), "CPMA urged to learn from FSA mistakes", *Financial Times*, 17 June.

Sants, H. (2009), *Intensive Supervision: Delivering the Best Outcomes*, FSA, London.

Sants, H. (2010), "UK financial regulation after the crisis", Annual Lubbock Lecture in Management Studies, FSA.

Shavell, S. (1993), "The optimal structure of law enforcement", *Journal of Law and Economics*, Vol. 36, pp. 255-87.

Shiller, R.J. (2000), "Measuring bubble expectations and investor confidence", *Journal of Psychology and Financial Markets*, Vol. 1, pp. 49-60.

Simon, H.A. (1955), "A behavioural model of rational choice", *Quarterly Journal of Economics*, Vol. 69, pp. 99-118.

Slovic, P. (2000), *Perception of Risk*, Earthscan Publications, London.

Slovic, P., Finucane, M.L., Peters, E. and Macgregor, D.G. (2004), "Risk as analysis and risk as feelings: some thoughts about affect, reason, risk, and rationality", *Risk Analysis: An International Journal*, Vol. 24, pp. 311-22.

Stigler, G. (1982), "Economists and public policy", *Regulation*, Vol. 6, pp. 13-17.

Sunstein, C.R. (1990), *After the Rights Revolution: Reconceiving the Regulatory State*, Harvard University Press, Cambridge, MA.

Sunstein, C.R. (2005), *Laws of Fear: Beyond the Precautionary Principle*, Cambridge University Press, Cambridge.

Sunstein, C.R. and Thaler, R.H. (2003), "Libertarian paternalism is not an oxymoron", *University of Chicago Law Review*, Vol. 70, pp. 1159-202.

Taylor, M. (1995), *Twin Peaks: A Regulatory Structure for the New Century*, Centre for the Study of Financial Innovation (CSFI), London.

Treasury (2010), *Financial Services Bulletin*, No. 5.

Turner, A. (2009), *Turner Review: A Regulatory Response to the Global Banking Crisis*, FSA, London.

Tversky, A. and Kahneman, D. (1974), "Judgment under uncertainty: heuristics and biases", *Science*, Vol. 185, pp. 1124-31.

Van De Veer, D. (1986), *Paternalistic Intervention: The Moral Bounds on Benevolence*, Princeton University Press, Princeton, NJ.

Van Den Bergh, R. (2008), "Enforcement of consumer law by consumer associations", in Faure, M. and Stephen, F.H. (Eds), *Essays in the Law and Economics of Regulation: In Honour of Anthony Ogus*, Intersentia, Antwerpen.

Wall, D. (1972), "Introduction", in Wall, D. (Ed.), *Essays in Economic Development*, University of Chicago Press, Chicago, IL.

Waters, D. (2006), "FSA consultation paper: overview of the 'reforming conduct of business regulation'", paper presented at BBA Conduct of Business Seminar.

Wilson, S. (2007), "Treating customers fairly: an assessment of industry's performance against the outcomes", paper presented at FSA Treating Customers Fairly Conference.

Yeung, K. (2004), *Securing Compliance: A Principled Approach*, Hart Publishing, Oxford.

About the author

Folarin Akinbami is a Post-Doctoral Researcher at Durham University. He obtained his PhD in Law from the University of Manchester. His research interests lie in financial regulation, commercial law, political economy and law and economics. Folarin Akinbami can be contacted at: folarin.akinbami@durham.ac.uk

Received May 2010
Revised May 2010
Accepted September 2010

Understanding the consumption process through in-branch and e-mortgage service channels

A first-time buyer perspective

Jane Coughlan, Robert D. Macredie and Nayna Patel
Department of Information Systems and Computing, Brunel University, Uxbridge, UK

Abstract

Purpose – The twin aims of this paper are to explore the differences in the consumption process between the traditional in-branch and web-based (e-mortgage) service channels and how the differences relate to any problems identified in the electronic service environment, with respect to information search and product evaluation.

Design/methodology/approach – A process-oriented approach comparing the two service channels (in-branch vs e-mortgage) was conducted in two study phases. Data from the e-mortgage process were collected using protocol analysis with 12 first-time buyers (FTBs) applying on a website belonging either to a hybrid or to an internet-only bank. Results of the e-mortgage process were mapped on to stages of the in-branch process, which was captured by observation of six FTB mortgage interviews to determine the level of correspondence and emergent issues.

Findings – Support for the FTB in the e-mortgage process was problematic and service provision was found to be product- rather than consumer-oriented.

Practical implications – The study highlights the importance of design issues in the electronic service environment for creating confidence in the online advice and information available on home mortgages for FTBs.

Originality/value – The paper promotes increased understanding by financial service providers of the characteristics that support the consultative selling process for complex products such as mortgages and inform multichannel retailing.

Keywords Electronic commerce, Information retrieval, Communications, Mortgage companies

Paper type Research paper

Introduction

The internet has transformed traditional business processes in providing interactive services for customers, with e-commerce activity being highest within the retail finance sector (Zwass, 2003). In the recent past, however, the global financial crisis has brought consumer confidence to an all-time low, which has been felt acutely in the housing market (Murphy, 2008). One contributory factor in the credit crunch could be the product-centric approach taken by the financial services industry, where mortgages were sold to customers who were unlikely to be able to maintain their repayments (Farquhar and Meidan, 2010). The focus of media attention in relation to mortgages during the credit crunch has been on first-time buyers (FTBs), with reports that numbers in the UK have hit a 20-year low (*The Guardian*, 2010). Notwithstanding the many socio-economic reasons that have prevented FTBs from entering the market (e.g.

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
pp. 148-167

0265-2323
DOI 10.1108/02652321111107639

affordability), adverse changes in the economic climate affect consumers' attitudes to financial services and particularly levels of trust in relation to financial advice.

Given that FTBs are integral to a buoyant housing market, there is an imperative to understand more fully the consumption process – especially for mortgages as one example of a complex financial product where consumer knowledge is low and uncertainty is high. Moreover, there is a paucity of research that specifically focuses on FTBs and their decision-making in relation to different service channels. In this context, mortgage products are particularly important to study as they have been found to present distinct challenges for selling remotely (i.e. using the internet as the channel for e-commerce or digital selling, rather than selling face-to-face or over the phone) even when market conditions have been considerably more stable (Vroomen *et al.*, 2005; Stanford, 2002).

Website design has been shown to be influential in whether a customer will use the electronic channel for financial services, where the provision of personal advice is integral to finding the best financial solution to meet customers' requirements (Ahonen *et al.*, 2006). Whilst these complex services can benefit from the electronic environment, the main advantage in the online channel is the accessibility and quality of the information and advice provided (Briggs *et al.*, 2002). This can influence the consumer positively in their decision to buy, although access to the sales advisor is the driver of channel choice (Frambach *et al.*, 2007).

Given the dependence on face-to-face contact with a sales person/adviser when buying complex products and services, a key issue in the design of electronic service environments is how the online process can complement the offline process, whilst taking advantage of the flexibility afforded by web systems and their influence on consumer's behavioural intention (Chiu *et al.*, 2005). Yet an understanding of the relationship between the real-life physical "brick", as opposed to the virtual web "click", buying process has not been well-explored within e-commerce research (Browne *et al.*, 2004). This is despite the fact that a wide range of products are sold online and that consumers' relationships with sellers vary with different goods and service types, depending on the way in which are supported in their purchasing decisions (Hseih *et al.*, 2005).

The specific focus of the inquiry in this paper is on mortgages and the FTB, which provides a useful case example for studying offline and online service channels for three noteworthy reasons:

(1) traditional branch banking has been increasingly displaced by the online delivery of products and services and this movement of financial services online is an ongoing area of research, with a focus on issues such as trust and the usefulness of the web (Aldas-Manzano *et al.*, 2009, Jayawardhena and Foley, 2000);

(2) studies of FTBs are rare, but they have been found to be less likely to purchase a mortgage online (Vroomen *et al.*, 2005); and

(3) relationship management in complex services is particularly important because of the level of risk and the lack of consumer knowledge associated with this product type, and so understanding consumption behaviour is necessary for developing delivery channels and improving service quality (Guenzi and Georges, 2010; Lymperopoulos *et al.*, 2006).

The paper is organised as follows. The next section provides the theoretical background to the study, reviewing the product classification literature with respect to complex products and services and consumption behaviour, which leads to two research questions. The methodology is then described, where the in-branch mortgage process is compared to the e-mortgage process in order to understand the characteristics that help or hinder customers in using services and providing them with a positive experience. The findings in relation to the two research questions are then presented, along with the implications of the work for understanding FTBs and how they can be supported in the purchase of complex products within an electronic service environment.

Related literature

Mortgages are an example of complex services, defined more specifically by Vroomen *et al.* (2005, p. 38) as:

> Services that consist of many attribute values per attribute, which are often tailor-made, infrequently purchased, more difficult to comprehend, and require in general assistance during the decision-making process.

Complex services which are transferred to the electronic service channel may be even more difficult for customers to understand because of the reduction of human assistance during the process. Services of this type will also entail a strong sense of "involvement" for customers, where the personal consequences, the expense, and the level of complexity will be high in terms of extensive problem-solving for products associated with this category of service (Cox and Brittain, 2000).

In addition, the purchase of these products will involve extensive information search and product evaluation (e.g. Guttman *et al.*, 1998), which feature as two of the five stages of the consumer buying process model (see Engel *et al.*, 1995):

(1) Need recognition.

(2) Information search.

(3) Evaluation of alternatives.

(4) Purchase decision.

(5) Post-purchase behaviour.

These stages have been found to apply equally well to web-based consumption activity as to traditional store-based consumption, and are useful for understanding how the online process is transforming consumer behaviour (Cole *et al.*, 2000). The stages in the consumer buying process are dynamic as the nature of the process will change according to the type of product being bought, for example, which in turn will affect the ease with which the process can be moved online (Klein, 2003).

Traditionally, mortgage applications have been conducted in-branch as communication-rich face-to-face interviews. In contrast, e-mortgages – which allow customers to make their mortgage application online, using a web-based system to take them through the information capture and decision-making process around product type and suitability – implicitly promise customers an ease of dealing with many issues with the service that can be confusing, time consuming and stressful. The difficulties of e-mortgages have been cited in the popular press where it is strongly suggested that the advantages of web-based banking have failed to translate to mortgages (Lewis, 2002).

Despite the many advantages that the internet can offer, the traditional mode of branch banking still predominates in mortgage lending, given that security issues, a lack of human contact, and the need for face-to-face discussions with an advisor remain concerns to the potential borrower (Durkin and O'Donnell, 2005; Willis *et al.*, 2001). This is the case even in the USA, where e-mortgages have a more established history (Baghai and Cobert, 2000). The continued reliance on the in-branch application model may arise because it is not clear how well the face-to-face process of a consumer interacting with a seller translates to online. For example, the mortgage process poses an interesting set of issues to online retailers as it also encapsulates a strong advisory component, where trained financial advisors consult face-to-face with their customers to problem-solve and find the best financial solution to meet their customers' property purchase requirements (Verhallen *et al.*, 1997). The concerns with replacing face-to-face interaction with an online e-mortgage process are likely to be even more acute for FTBs given their lack of experience of the mortgage consumption process.

Extensive research has found that product type has an important influence on consumer behaviour and particularly information search and evaluation (Girard *et al.*, 2003). Indeed, products that require knowledge, experience and personal interaction with a salesperson are less likely to be considered when shopping online (Levin *et al.*, 2003). This is owing to the fact that with complex products, such as mortgages, the electronic service environment can exacerbate information asymmetries between buyer and seller. These asymmetries are associated with the differences in knowledge about the product domain, which are not as easily bridged in online service provision because there is no real-time, expert human advice/support. The buyer's experience of, and competence in, using the online channel is also likely to play a part as lack of confidence in using computers and web services will limit a user's willingness to interact with the online system (Ramaswami *et al.*, 2000). As has been noted by Farquhar and Meidan (2010) information asymmetries between financial providers and their customers may have contributed to the product-centric approach to selling that played a part in the credit crunch.

One way to (at least partially) address these asymmetries is through the design of the website that shapes the customer's experience of the online channel. Such websites must effectively support consumers in their search for product information, reducing the uncertainty that they face and helping them to evaluate the options to make a purchase decision (Pavlou *et al.*, 2007; Venkatesh and Agarwal, 2006; Spiekermann, 2004). This way forward seems to fit well with the service-dominant logic view that has emerged in the literature (Lausch *et al.*, 2008). Here, the customer's interaction with the product becomes the focus, with mortgages (as a form of complex service) being seen as processes during which knowledge and skills are applied by one party for the benefit of another in a collaborative process of value creation. This movement towards the customer as the focus, with respect to mortgages, means co-creating a product that has value for both parties – an appropriate mortgage product where the customer is able to meet their mortgage repayments to the provider across its duration.

Previous work by Lymperopoulos *et al.* (2006) has shown that mortgages belong to a special category that comprise both service and product attributes, where consumers expect the financial service provider to be responsive of their requirements and effectively communicate financial advice on features of the products. To this end, various classifications of product types exist, although, as Ekelund *et al.* (1995) point out, there are no universally-accepted classification schemes for goods and services – a claim that a review of the contemporary literature still upholds. The earliest categorisation of product type, and one that informs many consumer shopping studies today, was by Nelson (1970) on the basis of search and experience characteristics. Where dependent on the ease of information search and evaluation, "search" goods (e.g. books) are easy to evaluate and sell online (Elliot and Fowell, 2000) and "experience" goods (e.g. tangible products such as cars or services such as insurance or pet-sitting) are difficult to evaluate until partially consumed (i.e. through test-drives or trial periods). Such "experience" goods therefore exhibit a lower level of channel switching, since the need for direct experience with the product and face-to-face interaction is, for most people, preferable to dealing with online retailers (Gupta *et al.*, 2004).

Since its introduction, Nelson's (1970) search-experience framework has been both extended and challenged. Notably, Darby and Karni (1973) added "credence" goods to the existing classification – products/services sold within relationships characterised by high levels of information asymmetry, where the seller determines the customer's requirements. Later work by Burke (2002) established differences between product categories when shopping online and in-store with respect to product information. Access to detailed product information in the case of durable goods (e.g. major appliances) was found to be far greater than that for frequently purchased goods, such as groceries. For these goods, when shopping online the importance of product specifications and expert ratings of quality were clear, when shopping in-store, the level of information was equivalent and provided by knowledgeable sales assistants and information kiosks.

Within the search-experience-credence (SEC) framework debate exists on the allocation of products to categories, particularly those ones that are considered complex, such as financial products. For example, Howden and Pressey (2008) and Hseih *et al.* (2005) both classified insurance as a "credence" good, whereas (Animesh *et al.*, 2005) categorised (auto) insurance as an "experience" good. Other researchers have sought improvements and suggested refinements to the framework. Peterson *et al.* (1997) were among the first to call for revisions to the framework in light of the internet's capabilities and introduce some other aspects to describe complex products such as value proposition (e.g. tangibility – clothing versus insurance). Lowengart and Tractinsky (2001) presented a simpler categorisation relevant to complex products based on risk (low/high), and Hahn and Kauffman (2002) proposed a classification based on the level of information-seeking required or level of involvement (low/high) and frequency of purchase. Using elements of existing categorisations, such as tangibility and cost, Wijnhoven (2002) has pointed out that there is little work in the literature into "intangible" goods – where Vijayasarathy (2003) classified a mortgage as a "high cost-intangible product" – despite the fact that the product type will make a difference to e-commerce process models. The lack of consistency across existing classifications adds to the debate over theoretical frameworks for buying complex services and may lend some support to the service-dominant logic model as it suggests a need to highlight other characteristics that better differentiate between products and the nature of the accompanying consumption behaviour at different stages of the process (see Lindberg and Nordin, 2008).

One way to investigate the design of the electronic service environment and FTB buying behaviour of complex goods is to take an explicit process-oriented approach, in line with previous work (Schmid and Rossi, 2004). This approach can investigate how the online service channel relates to the traditional buying process with human sellers, and whether and how it offers added value over traditional methods of delivering products and services. There are few studies that have explicitly focused on a particular (and comparably complex) product within financial services. A notable exception is Harrison's *et al.* (2006) study on pensions and the purchase decision process, which found that participants exhibited confusion and doubt within the stages of the consumption process. Later work examining pension and investment products found that whilst consumers may change channels for information searches, they tended to opt for face-to-face interaction with an independent financial adviser (Gough and Nurullah, 2009).

Notwithstanding the importance of other consumer variables such as satisfaction on purchase behaviour (Makarem and Mudambi, 2009) and sophistication or "savviness" in the interaction with technology based in part on increased competencies in searching for and evaluating product information (Macdonald and Uncles, 2007), the present study can be positioned against recent work that focuses on understanding characteristics of the product and the information required for consumers to make a purchasing decision (Axelsson, 2008). Within this scope, we aim to understand the purchase/consumption process of a complex product through traditional and electronic service environments and the consumer experience as they move through this process.

Research questions

Given the lack of research into the mortgage consumption process and an understanding of decision making involved, the study presents an exploratory and qualitative inquiry that identifies the interaction issues at the different stages of the process. Central to this are two key research questions:

(1) How does the traditional mortgage consumption process differ from the e-mortgage process? Prevailing evidence suggests that design problems manifest when business processes are moved online; the study will examine the similarities and differences between stages of the traditional process in relation to the online version.

(2) What are the problems with the e-mortgage consumption process with respect to supporting FTBs' information search and product evaluation? This research question specifically relates to stages 2 (information search) and 3 (evaluation of alternatives) of the consumer buyer process model of Engel *et al.* (1995), which have been found to be critical to the problem solving aspects of buying complex products such as mortgages.

Methodology

The study gathered qualitative data in a small-scale exploratory investigation into the in-branch and e-mortgage process in order to undertake a comparative analysis, which was carried out in two phases: phase I investigated the traditional in-branch process and phase II the e-mortgage process.

Phase I: identifying stages of the in-branch mortgage process

In order to identify the stages involved in the in-branch mortgage process, a field study was conducted with a high street bank, and a major lender in the UK. Data on the mortgage process was collected as part of a three-month period in the field, which included direct observation of mortgage advisors' interviews with clients in three different branches and mortgage advisor training sessions. The mortgage interviews (scheduled in hourly slots) were conducted using a point-of-sale system, which is a customer-facing system that guides the interview and captures customer data. Observation of the training sessions allowed for first-hand experience with the mortgage process as delivered by the system. Observation of the mortgage advisors' interviews with clients focused on how FTBs experience the in-branch mortgage process. Over the course of the field work, six mortgage interviews were observed; this number was dependent on mortgage appointments by FTBs being made and the clients' permission for an observer to be present.

Phase II: identifying stages in the e-mortgage process

A leading internet directory for UK financial websites was searched in order to identify Internet banks that could be used for comparative purposes with respect to the stages of the mortgage application process identified in phase I. From a directory that contained a list of the "Top 10 most popular mortgage lenders" websites, only two banks offered a full mortgage application facility for FTBs and could therefore be selected for evaluation. These were a hybrid (possessing both a physical and online presence) and an internet-only bank; both banks were award-winning for their online mortgages and lending services.

Participants

In order to identify the issues related to the e-mortgage process, user trials were conducted. Since the focus was on problems in the consumption process when services/products are delivered via the online channel, participants were recruited on the basis of two key criteria that were controlling variables. First, participants had to be frequent, or "savvy", internet users (at least 15 hours per week). This criterion aimed to ensure that participants were confident and experienced enough to buy a product online any that any problems identified would be unlikely to be related to concerns of technology use. Second, participants had to have no history of mortgage applications. This criterion aimed to ensure that participants would be representative of a FTB in having little prior knowledge of mortgage products, thus relying heavily on the website to support them through the consumption process. A total of 12 participants (six males and six females) ranging in age from 24 to 35 were recruited; since the study was exploratory and highly-focused on gathering qualitative data, this sample size was seen as sufficient to reach data saturation. The 12 participants were split into two groups of six to walk through the e-mortgage process with the hybrid and internet-only bank.

Data collection

The data were collected using protocol analysis, which is a common research technique in studying users' interaction with a website and requires participants to think aloud and provide continuous verbal reports of their actions and thoughts (e.g. Benbunan-Fich, 2001; e.g. Li *et al.*, 2001). A pilot study to test the technique demonstrated that the participants understood the instructions and produced short verbal protocols, which were easily recordable in note form on printed screen shots of the mortgage application and were uttered when a problem with the website was identified. These utterances took the form of user quotes that provided a verbal explanation for the actions performed along with any observed behaviour that accompanied the utterance (e.g. smiling, shrugging, etc.). The researcher also prompted participants into verbalising an action should they "mouse click" without explanation. To start, participants were briefed on their task (applying for a mortgage online) and provided with all of the information necessary to complete the application in the form of a "dummy customer" profile. This prevented them from having to reveal their own personal details and the need to return to the application at a later date. At the end of the session, the participant was asked by the researcher if they would have submitted the form had the application been genuine.

Data analysis

Coding of the protocols from the user study was conducted manually in a three-stage process and followed an inductive approach to allow patterns and themes to emerge from the data, which is in keeping with exploratory and qualitative research conducted in similar study contexts such as retail banking channels (Farquahar *et al.*, 2008). The first stage involved examining the 157 utterances gathered in total – 88 utterances for the hybrid bank and 69 utterances for the internet-only bank. Two of the authors coded each utterance independently by attaching a content label that summarised the unit of thought within the utterance to develop a broad coding scheme. For example, the utterance: "there's too much information to take in" contains a reference to information and a reference to the excess amount and was labelled as excessive information, a term which would be refined in the next round of coding. In the second stage, the authors collaborated (as part of an interpretive data coding approach) to refine and confirm the coding scheme and assign the content labels to themes. The results of this iterative process produced eight themes that were developed and agreed during this stage. For example, the content label: excessive information was assigned to the theme of "overloading". In the third stage, the authors reflected in more depth on the themes drawn from the data in a process that suggested a grouping of the eight themes into two overarching themes: information and process.

Findings

The findings from the two-phased study (observational and protocol analysis) to identify stages of the in-branch and e-mortgage process respectively are framed according to the two research questions as follows.

How does the in-branch mortgage consumption process differ from the e-mortgage process?

The in-branch mortgage process comprised eight stages of which stages 4 and 5 specifically relate to information search and evaluation of alternatives, as defined in the consumer buying process model outlined previously (see Table I).

The eight stages of the in-branch process were validated by discussion with the mortgage advisors to establish the distinct stages of the mortgage process as part of the field study. The content of the stages in the process are also supported by Verhallen *et al.* (1997), which is a rare example of work that explicitly examines the mortgage process, and which focused on 20 content categories (as opposed to stages) of the

Stage	Description
1. Client introduction	Data collection concerning the client's personal details
2. Bank introduction	Information regarding the mortgage provider and explanation of the level of advice and code of mortgage lending guidelines
3. Financial assessment	Data collection determining credit history (e.g. savings, loans and bankruptcy claims)
4. Explanation of mortgage products	Information regarding the various mortgage products on offer
5. Establish customer preference	Data collection determining clients' wishes
6. Explanation of mortgage payment options	Information explaining aspects of the mortgage product (e.g. mortgage payments)
7. Property assessment	Information explaining valuation and insurance options
8. Save details and print quote	Close of interview and discussion of the offer

Table I.
Stages of the in-branch mortgage consumption process

mortgage interview. This may have been owing to the fact that a computer system (such as the point-of-sale system in the present study) may not have been used to structure the interview. However, the current field study generated the same content information suggesting that the core information exchanged is common, and that there is a normative process in traditional consumption of mortgage products. These eight stages of the in-branch process are used to map the stages of the e-mortgage process for the hybrid and internet-only bank, as shown in Table II, so that correspondence between stages in the in-branch and on-line processes can be clearly seen.

On average, the participants required 52 minutes to complete the application for the hybrid bank and 32 minutes to complete the application for the internet-only bank. As Table II shows, whilst a normative process has been established for the in-branch process, the online mortgage process shows considerable variation for the two online banks under study. In the hybrid bank, the e-mortgage process has been divided into three stages, where the majority of the application is completed in stage 3. In the internet-only bank, the e-mortgage process consists of 12 stages, with the application activities being fairly evenly distributed across all stages. Furthermore, the sequencing of the stages of the mortgage process from the hybrid and Internet-only banks matches neither the in-branch stages nor each other. In fact, the e-mortgage stages are out of sequence with the in-branch version and stages of the in-branch process are missed out altogether (e.g. stages 2 and 4). Having established inconsistencies in the consumption process between the in-branch and e-mortgage service channel for different business models (hybrid and internet-only), the second part of the study investigates the effects of this in more depth and highlights the nature of the problems at each stage of the e-mortgage process to address research question 2.

What are the problems with the e-mortgage consumption process with respect to supporting FTBs' information search and product evaluation?

Table III shows the eight emergent themes from the stages of the e-mortgage consumption process – overloading, insufficiency, sufficiency, absence, confusion,

Table II. Relationship of the in-branch to the e-mortgage stages in the consumption process

Stage	Description (and step)	Correspondence to in-branch stages 1	2	3	4	5	6	7	8
Hybrid									
1	Calculation (mortgage illustrations)				ν	ν	ν	ν	
2	Personal details	ν							
3	Online application form (financial commitments)	ν		ν					ν
Internet-only									
1	Type of mortgage					ν			
2	Personal details	ν							
3	Contact details	ν							
4	Previous mortgage details								
5	Income and employment	ν							
6	Financial commitments			ν					
7	Property details							ν	
8	Mortgage details							ν	
9	Illustrations of mortgage						ν		
10	Additional details								
11	Submit application								ν
12	Application progress	ν				ν		ν	

Stage	Description	Themes
Hybrid		
1	Calculation (mortgage illustrations)	Overloading Insufficiency Absence
2	Personal details	Confusion Structure
3	Online application form (financial commitments)	Sufficiency Progress Termination
Internet-only		
1	Type of mortgage	Insufficiency Absence Structure
2	Personal details	Sufficiency
3	Contact details	Progress
4	Previous mortgage details	Confusion
5	Income and employment	Sufficiency
6	Financial commitments	Sufficiency
7	Property details	Sufficiency
8	Mortgage details	Sufficiency
9	Illustrations of mortgage	Sufficiency
10	Additional details	Sufficiency
11	Submit application	Termination
12	Application progress	Sufficiency

Table III.
Themes corresponding to each stage of the consumption process for e-mortgages

structure, progress, and termination – which characterise the users' interaction experiences with the e-mortgage process.

Stage 1 of the e-mortgage process is the most problematic for both banks, as revealed by the negative themes identified; this is noteworthy because stage 1 is where the information gathering activities for the mortgage product occurs. It would appear that, for both banks, the stages that affected the buying process are the ones related to mortgage products and the type of mortgage required. According to Engel *et al.*'s (1995) consumer buyer decision model discussed earlier in the paper, this means that these e-mortgage applications disrupt the most important stages (2 and 3) that relate to information searching and the evaluation of alternatives, in which information relating to mortgage products is crucial.

The set of eight themes can be grouped into two distinct categories or overarching themes (as shown in Table IV):

(1) *information* – overloading, insufficiency, sufficiency, absence, confusion; and

(2) *process* – structure, progress, termination.

The overarching themes are put forward as two indicators of service quality with respect to online delivery of mortgage services. Given that the content themes are negatively framed, these are construed as clear gaps or weaknesses in the delivery of the service, which are exacerbated by the lack of a human element (Cox and Dale,

Theme	Problem	Representative FTB Utterance
Information		
Overloading	The FTB feels overwhelmed by the message (e.g. pages and pages of information that are not easy to read at-a-glance)	"There's too much information to take in" (hybrid) "There is a lot of information, is it necessary to read it?" (internet-only)
Insufficiency	The FTB cannot understand the message (e.g. clicking on some links provides users with little extra information)	"Oh no, I would need to speak to someone at this point, it's a big commitment and I don't feel confident" (hybrid) "It's not clear what to do. I want a quick quote but I have to register" (internet-only)
Sufficiency	The FTB feels confident that they can make an informed decision (e.g. a mortgage step is clearly explained)	"That was easy!" (hybrid) "Quick and easy!" (internet-only)
Absence	The FTB cannot see where to navigate to find information (e.g. products are introduced as inactive links which, however, require explanation)	"It's asking me to choose a product but I haven't been given any information about them" (hybrid) "Should there be something I should put in here?" (internet-only)
Confusion	The FTB is thrown by being asked for the same information that delays and reduces the quality of the message (e.g. continual repetition of requests for information)	"Oh, I thought I had already entered these details" (hybrid) "It was straightforward, but all I want is information about my mortgage. I keep having to enter my personal details" (internet-only)
Process		
Structure	The FTB needs the process to be transparent in order to understand the overall message (e.g. the poor sequencing of information that suggests inconsistency)	"The personal details bit keeps popping up in the middle of the application" (hybrid) "They should have indicated what information we needed before we start completing the application form" (internet-only)
Progress	The FTB ceases to find the message relevant if they cannot see a clear end (e.g. the number of stages of the application form is not made explicit from the start)	"How much longer will this take?" (hybrid) "How far through am I? – don't know – the information is not provided" (internet-only)
Termination	The FTB needs closure and will interrupt the process themselves if necessary (e.g. if the user interrupts or the interface naturally ends the process)	"So has this been sent to the bank then?" (hybrid) "Fine" (internet-only)

Table IV.
Grouping and description of themes, and representative FTB utterances

2001). The following discussion will illustrate and discuss the themes and use them to identify design recommendations that will be presented in the next section of the paper. These recommendations aim to address the gaps in the delivery of the service and are given identifiers for ease of reference.

With respect to the overarching theme of "information", concerned with the content of the message that the website sends to the FTB, the negative content themes point to the recurring problem of asymmetric information, where the financial provider through the electronic service channel assumes a level of knowledge on the part of the consumer that he/she does not possess.

These asymmetries are found within the online service environment as well as between business to consumer. For example, diametrically opposed themes of "overloading" and "absence" were identified from the participant protocols, particularly with reference to details on the mortgage products (stage 1 for both banks). Participants experienced a huge cognitive overhead (theme: overloading) in trying to understand the information presented to them. They expressed this in terms of the quantity of information, typically stating that "there is too much information". In the first stage, both banks also failed to present any information (theme: absence) that the participant perceived as useful in making a decision at that stage of the process. They expressed this as a lack of information, typically saying: "I haven't been given any information". A design recommendation to cater for both overload and absence of information relevant to details on mortgage products will need to balance the amount of information provided (see gap 1: information – recommendation 1, in the following section).

At some stages of the process, participants felt that information was not completely overwhelming or lacking but that there was not enough information (theme: insufficiency); this could induce a lack of confidence or the need to speak to a human advisor. There were also occasions where participants felt that the information that was presented to them was not understandable (theme: confusing) and was contrary to their expectations, particularly when previously provided information was requested for a second time. The confusion felt within the electronic service environment had an emotive effect – a finding reflected in recent work that highlighted the resistance that customers exhibit in response to the level of information and guidance offered when banking online (Laukkanen *et al.*, 2009). This could, for example, be seen in instances where FTBs experienced illogical information (theme: confusion). In these cases, participants' accompanying physical behaviour was a clear indicator and emphasised their verbal utterance, for instance shaking their head – "no" – whilst squinting at the screen. The general consensus of participants was that there did not appear to be any logical sequence to the way that information was being provided, and observation of the FTBs found them selecting links within the on-line systems at random. Any design recommendation to cater for both insufficient and confusing information will need to attend to the navigational and presentational issues of the information (see gap 1: information – recommendation 2, in the following section).

The overarching theme of "process" is related to the ease of use with which services are provided in the online service environment. Significant problems can occur when the electronic environment is conceived and designed as more of a self-service process as this is unsuitable for a consumer such as a FTB who lacks knowledge of the complex domain associated with the service. At some stages of the process, the participants felt that there was a degree of inconsistency that jarred with them owing to the fact that the interaction with the website did not flow (theme: structure). For example, when FTBs did progress through the application, they expressed concern about the lack of feedback and whether or not the information that they had provided was correct. Indeed, the navigational freedom that FTBs had in directing the entire process appeared to make some of them feel uncomfortable and unsure that the process that they were following was correct. This was manifest in hesitation and periods of inactivity, where some of the participants looked to the researcher for guidance on what to do (although none was given). A design recommendation to cater for these problems of structure of the process will need to attend to issues of transparency regarding the process in which the consumers engage (see gap 2: process – recommendation 3, in the following section).

The themes of progress and termination identified in relation to the process gap are qualitatively different from the other themes identified. They are, at least to some degree, product/service independent and could be seen to be related to e-commerce more generally, where consumers expect that the online medium will provide feedback on the current stage of the process. Complex services such as mortgages necessitate lengthy exchanges of question and answers, but FTBs who have no experience of the process require signposting with respect to the stage that has been reached. Participants' problems in this area were characterised by not knowing where they were in the process or whether their application had been sent. A design recommendation to address issues related to progress (and to allow for termination at any point) will need to stress the importance of providing information on the location of the user within the process, which is commonly signposted during a face-to-face interview (see gap 2: process – recommendation 4, in the following section).

From the study, one of the 12 FTBs abandoned the application in stage 1 (for the internet-only bank) as she was dissatisfied with the amount of information provided in order to proceed with the application. A total of 11 FTBs therefore completed the application, but all expressed a lack of confidence in the e-mortgage process and would not have proceeded with a purchase within the electronic service environment. This result is interesting as it could have some bearing on channels of service delivery. Despite the fact that the hybrid bank's high street presence would be extremely familiar to users, there were no qualitative differences between the communication experiences with the banks, and a greater proportion of the internet-only bank's application was easier to complete, illustrated by the recurrent theme in the data of "sufficiency" and satisfaction with the level of information provided.

Discussion and implications

The findings from the study are in keeping with recent work, which has found that the interfaces of electronic services essentially do not have the right service designs to deliver what the customer expects, are not structured to the customer's particular circumstances and tend to be product- rather than consumer-oriented – a position which people find difficult to understand and, furthermore, trust (Yap *et al.*, 2010; Salonen *et al.*, 2006). The process-based nature of this study, supplemented by the thematic findings, supports the view that there are problems in moving business processes online (Reinders *et al.*, 2008). The study also highlights the need to provide supporting elements for the customer, especially the FTB, during the service process given their traditional reliance on personal advice and face-to-face interaction.

The main conclusions of the study can be framed as a set of four recommendations to improve the design of electronic service environments. These are drawn from the analysis of the protocols presented in Table III with respect to the overarching themes of information and process, which are construed as service delivery gaps in relation to quality.

Gap 1: information

Recommendation 1: "provide relevant information to the FTB enquiry and not the transaction", which means that the electronic selling process needs to reflect the consumers' buying process. For example, forcing FTBs to select additional insurance products without explaining why they would need them only serves to satisfy the technicalities of the transaction and will not develop trust in the product that they are purchasing (content themes: overloading; absence).

Recommendation 2: "balance interaction between website and consumer navigation", which is important as FTBs do not feel comfortable in having complete control over a complex and high-cost intangible product-buying process. For example, some of the terms used in mortgage lending require explanation to help the FTB to understand exactly what a mortgage commitment involves. Process support at important decision-making steps (e.g. providing a clear set of options), in order to help information gathering stages and navigational freedom in others, would expedite the buying process (content themes: insufficiency; confusion).

Gap 2: process

Recommendation 3: "ensure the buying process flows naturally and is transparent to the FTB", as any disruptions will be difficult for the e-consumer to overcome without the presence of a sales advisor. For example, repeating a request for personal details during the process jars with the FTB as in human conversation terms this would appear as if the e-mortgage advisor was not "listening" to them (content theme: structure).

Recommendation 4: "locate the consumer within the service process", as these types of buying processes are complex and lengthy and the FTB needs to be aware of the structure of the process given the high level of involvement that they face in making the final decision. For example, neither of the two e-mortgage applications provided any indication as to the structure of the process, which can lead to poor first impressions and a lack of a "roadmap" against which the FTB can locate themselves as they carry out the process. For the FTB to grasp the process end-to-end it is vital to assure them that they are moving through the application in an efficient style and not just navigating through endless pages, which may impair the decision to buy (content themes: progress; termination).

Principally, this study has shown that, at a process level, there appears to be limited understanding of how FTBs buy products – that is, the consumption process is poorly understood. In a consultative selling process the buyer-seller relationship was weakened when the needs related to information search and evaluation were not met. The significance of this is two-fold: first, while designing e-mortgages is a challenging undertaking, it would be more likely to attract customers if it was successfully sold online; second, mortgage product types, by their nature, rely on strong buyer-seller relationships. Much of the evidence suggests that in retail finance consumers view these commercial relationships in the same way as personal relationships, which can influence buying behaviour positively or negatively (O'Donnell *et al.*, 2002).

Future work

In the current economic climate, where banks need to attract back first-time buyers, a deeper understanding of the consumption process for complex products such as mortgages would be beneficial. This study has shown that focusing on the product and taking a process view is useful in explaining how users, such as FTBs, experience the consumption of complex services. There are several service-related issues arising from this study that are worthy of future work, in light of the findings from the protocols that have demonstrated that there are significant differences in application processes for e-mortgages.

First, the present study has put forward a set of design recommendations, related to gaps in service delivery, which could be used as heuristics to evaluate electronic banking service channels and refine and develop our understanding of delivering complex services for other products such as pensions and insurance. Second, developing a best practice and normative process for online mortgage applications would be prudent given the level of inconsistency with the offline process and the lack of available human advice-giving in the online customer experience. The consumer buyer behaviour model has proved a useful but generic basis from which to understand consumption, but future research should look in greater depth to understand the activities that constitute complex consumption for services such as mortgages and design around them so that that website supports the purchasing stages (Tan and Wei, 2006). Third, investigating the way in, and extent to, which user characteristics in relation to technology use (e.g. levels of technology familiarity or "savviness") and product/service provision (e.g. comfort with levels of perceived risk) influence the consumption process and have direct implications for product/service design (Mayer *et al.*, 2003). Focused research to address these issues may help mortgage providers to enhance the advisory aspects of the buyer-seller relationship online, close potential information and process gaps and promote the electronic service on offer.

References

Ahonen, A., Jãrvinen, R. and Ruohonen, M. (2006), "Exploring the characteristics of electronic insurance service concept – consumers perspective", paper presented at International Conference on Service Systems and Service Management (ISSSM'06), Troyes, France.

Aldas-Manzano, J., Lassala-Navarre, C., Ruiz-Mafe, C. and Sanz-Blas, S. (2009), "Key drivers of internet banking", *Online Information Review*, Vol. 33 No. 4, pp. 672-95.

Animesh, A., Ramachandran, V. and Viswanathan, S. (2005), "Online advertisers' bidding strategies for search, experience, and credence goods: an empirical investigation", paper presented at Workshop on Sponsored Search Auctions, in conjunction with the ACM Conference on Electronic Commerce, Vancouver, Canada.

Axelsson, K. (2008), "Exploring relationships between products characteristics and B2C interaction in electronic commerce", *Journal of Theoretical and Applied Electronic Commerce Research*, Vol. 3 No. 2, pp. 1-17.

Baghai, P. and Cobert, B.F. (2000), "The virtual reality of mortgages", available at: www.mckinseyquarterly.com/electron/vire00.asp

Benbunan-Fich, R. (2001), "Using protocol analysis to evaluate the usability of a commercial web site", *Information and Management*, Vol. 39 No. 2, pp. 151-63.

Briggs, P., Burford, B., De Angeli, A. and Lynch, P. (2002), "Trust in online advice", *Social Science Computer Review*, Vol. 20 No. 1, pp. 321-32.

Browne, G.J., Durrett, J.R. and Wetherbe, J.C. (2004), "Consumer reactions toward clicks and bricks: investigating buying behaviour on-line at stores", *Behaviour and Information Technology*, Vol. 23 No. 4, pp. 237-45.

Burke, R.R. (2002), "Technology and the customer interface: what customers want in the physical and virtual store", *Journal of the Academy of Marketing Science*, Vol. 30 No. 4, pp. 411-32.

Chiu, H.-C., Hseih, Y.-C. and Kao, C.-Y. (2005), "Website quality and customer's behavioural intention: an exploratory study of the role of information asymmetry", *Total Quality Management*, Vol. 16 No. 2, pp. 185-97.

Cole, M., O'Keefe, R.M. and Siala, H. (2000), "From the user interface to the consumer interface", *Information Systems Frontiers*, Vol. 1 No. 4, pp. 349-61.

Cox, J. and Dale, B. (2001), "Service quality and e-commerce: an exploratory analysis", *Managing Service Quality*, Vol. 11 No. 2, pp. 121-31.

Cox, R. and Brittain, P. (2000), *Retail Management*, Pearson Education Ltd, Harlow.

Darby, M.R. and Karni, E. (1973), "Free competition and the optimal amount of fraud", *Journal of Law and Economics*, Vol. 16 No. 1, pp. 67-86.

Durkin, M. and O'Donnell, A. (2005), "Towards a model of adoption in internet banking: strategic communication challenges", *Service Industries Journal*, Vol. 25 No. 7, pp. 861-78.

Ekelund, R.B., Mixon, F.G. and Ressler, R.W. (1995), "Advertising and information: an empirical study of search, experience and credence goods", *Journal of Economic Studies*, Vol. 22 No. 2, pp. 33-43.

Elliot, S. and Fowell, S. (2000), "Expectations versus reality: a snapshot of consumer experiences with internet retailing", *International Journal of Information Management*, Vol. 20 No. 5, pp. 323-36.

Engel, J., Blackwell, R. and Miniard, P. (1995), *Consumer Behaviour*, Dryden Press, Fort Worth, TX.

Farquhar, J. and Meidan, A. (2010), *Marketing Financial Services*, Palgrave Macmillan, Basingstoke.

Farquahar, J., Panther, T. and Wright, L.-T. (2008), "To have and to hold: managing channels in UK high street financial services", *Qualitative Market Research: An International Journal*, Vol. 11 No. 4, pp. 425-38.

Frambach, R., Roest, H. and Krishnan, T. (2007), "The impact of consumer internet experience on channel preference and usage intentions across the different stages of the buying process", *Journal of Interactive Marketing*, Vol. 21 No. 2, pp. 26-41.

Girard, T., Korgaonkar, P. and Silverblatt, R. (2003), "Relationship of type of product, shopping orientations, and demographics with preference for shopping on the internet", *Journal of Business Psychology*, Vol. 18 No. 1, pp. 101-20.

Gough, O. and Nurullah, M. (2009), "Understanding what drives the pension decision in pension and investment products", *Journal of Financial Services Marketing*, Vol. 14 No. 2, pp. 151-72.

(The) Guardian (2010), "First-time buyers near 20-year low", available at: www.guardian.co.uk/money/2010/apr/21/first-time-buyers-20-year-low

Guenzi, P. and Georges, L. (2010), "Interpersonal trust in commercial relationships: antecedents and consequences of customer trust in the salesperson", *European Journal of Marketing*, Vol. 44 Nos 1/2, pp. 114-38.

Gupta, A., Su, B. and Walter, Z. (2004), "An empirical study of consumer switching from traditional to electronic channels: a purchase-decision process perspective", *International Journal of Electronic Commerce*, Vol. 8 No. 3, pp. 131-61.

Guttman, R.H., Moukas, A.G. and Maes, P. (1998), "Agent mediated electronic commerce: a survey", *Knowledge Engineering Review*, Vol. 13 No. 2, pp. 143-52.

Hahn, J. and Kauffman, R.J. (2002), "Information foraging in internet-based selling: a systems design value assessment framework", in Shaw, M. (Ed.), *E-Business Management: Integration of Web Technologies with Business Models*, Kluwer Academic Publishers, New York, NY, pp. 195-230.

Harrison, T., Waite, K. and White, P. (2006), "Analysis by paralysis: the pension purchase decision process", *International Journal of Bank Marketing*, Vol. 24 No. 1, pp. 5-23.

Howden, C. and Pressey, A. (2008), "Customer value creation in professional service relationships: the case of credence goods", *The Service Industries Journal*, Vol. 28 No. 6, pp. 789-812.

Hseih, Y.-C., Chiu, H.-C. and Chiang, M.Y. (2005), "Maintaining a committed online customer: a study across search-experience-credence products", *Journal of Retailing*, Vol. 81 No. 1, pp. 75-82.

Jayawardhena, C. and Foley, P. (2000), "Changes in the banking sector – the case of internet banking in the UK", *Internet Research*, Vol. 10 No. 1, pp. 19-30.

Klein, L. (2003), "Creating virtual product experiences: the role of telepresence", *Journal of Interactive Marketing*, Vol. 17 No. 1, pp. 41-55.

Laukkanen, T., Sinkkonen, S. and Laukkanen, P. (2009), "Communication strategies to overcome functional and psychological resistance to internet banking", *International Journal of Information Management*, Vol. 29 No. 2, pp. 111-18.

Lausch, R., Vargo, S. and Wessels, G. (2008), "Toward a conceptual foundation for service science: contributions from service-dominant logic", *IBM Systems Journal*, Vol. 47 No. 1, pp. 5-14.

Levin, A.M., Levin, I.P. and Heath, C.E. (2003), "Product category dependent consumer preferences for online and offline shopping features and their influence on multi-channel retail alliances", *Journal of Electronic Commerce Research*, Vol. 4 No. 3, pp. 85-93.

Lewis, H. (2002), "Online mortgages slow to catch on", available at: www.bankrate.com/brm/news/mtg/20020516a.asp?print=on

Li, H., Daugherty, T. and Biocca, F. (2001), "Characteristics of virtual experience in electronic commerce: a protocol analysis", *Journal of Interactive Marketing*, Vol. 15 No. 3, pp. 13-30.

Lindberg, N. and Nordin, F. (2008), "From products to services and back again: towards a new service procurement logic", *Industrial Marketing Management*, Vol. 37, pp. 292-300.

Lowengart, O. and Tractinsky, N. (2001), "Differential effects of product category on shoppers' selection of web-based stores: a probabilistic modeling approach", *Journal of Electronic Commerce Research*, Vol. 2 No. 4, pp. 142-56.

Lymperopoulos, C., Chaniotakis, I. and Soureli, M. (2006), "The importance of service quality in bank selection for mortgage loans", *Managing Service Quality*, Vol. 16 No. 4, pp. 365-79.

Macdonald, E. and Uncles, M. (2007), "Consumer savvy: conceptualisation and measurement", *Journal of Marketing Management*, Vol. 23 Nos 5/6, pp. 497-517.

Makarem, S. and Mudambi, S. (2009), "Satisfaction in technology-enabled service encounters", *Journal of Services Marketing*, Vol. 23 No. 3, pp. 134-44.

Mayer, K., Bowen, J. and Moulton, M. (2003), "A proposed model of the descriptors of service process", *The Journal of Services Marketing*, Vol. 19 No. 3, pp. 174-84.

Murphy, D. (2008), "A preliminary enquiry into the causes of the credit crunch", *Quantitative Finance*, Vol. 8 No. 5, pp. 435-51.

Nelson, P. (1970), "Information and consumer behaviour", *Journal of Political Economy*, Vol. 78 No. 2, pp. 311-29.

O'Donnell, A., Durkin, M.G. and McCartan-Quinn, D. (2002), "Corporate banking in the UK: personal vs remote interaction", *International Journal of Bank Marketing*, Vol. 20 No. 6, pp. 273-84.

Pavlou, P.A., Liang, H. and Xue, Y. (2007), "Understanding and mitigating uncertainty in online exchange relationships: a principal-agent perspective", *MIS Quarterly*, Vol. 31 No. 1, pp. 105-36.

Peterson, R.A., Balasubramanian, S. and Bronnenberg, B.J. (1997), "Exploring the implications of the internet for consumer marketing", *Journal of the Academy of Marketing Science*, Vol. 25 No. 4, pp. 329-46.

Ramaswami, S., Strader, T. and Brett, K. (2000), "Determinants of on-line channel use for purchasing financial products", *International Journal of Electronic Commerce*, Vol. 5 No. 2, pp. 95-118.

Reinders, M.J., Dabholkar, P.A. and Frambach, R.T. (2008), "Consquences of forcing consumers to use technology-based self-service", *Journal of Service Research*, Vol. 11 No. 2, pp. 107-23.

Salonen, J., Ahonen, A. and Koskinen, H. (2006), "Exploring the possibilities for mobile insurance services", in Seppä, M., Hannula, M., Järvelin, A.-M., Kujala, J., Ruohonen, M. and Tiainen, T. (Eds), *Frontiers of e-Business Research*, Tampere University of Technology and University of Tampere, Tampere.

Schmid, H.A. and Rossi, G. (2004), "Modeling and designing processes in e-commerce applications", *IEEE Internet Computing*, Vol. 8 No. 1, pp. 19-27.

Spiekermann, S. (2004), "Product context in EC websites: how consumers' product focus drives their navigational needs", *Proceedings of the 5th ACM Conference on Electronic Commerce*, New York, NY, pp. 200-7.

Stanford, M. (2002), "Mortgage banking: internet and integration are key", *IT Professional*, Vol. 4 No. 2, pp. 47-52.

Tan, G. and Wei, K.-K. (2006), "An empirical study of web browsing behaviour: towards an effective website design", *Electronic Commerce Research and Applications*, Vol. 5 No. 4, pp. 261-71.

Venkatesh, V. and Agarwal, R. (2006), "Turning visitors into customers: a usability-centric perspective on purchase behavior in electronic channels", *Management Science*, Vol. 52 No. 3, pp. 367-82.

Verhallen, T.M.M., Greve, H. and Frambach, R.T. (1997), "Consultative selling in the financial services: an observational study of the mortgage mediation process", *International Journal of Bank Marketing*, Vol. 15 No. 2, pp. 54-9.

Vijayasarathy, L.R. (2003), "Shopping orientations, product types and internet shopping intentions", *Electronic Markets*, Vol. 13 No. 1, pp. 67-79.

Vroomen, B., Donkers, B., Verhoef, P.C. and Franses, P.H. (2005), "Selecting profitable customers for complex services on the internet", *Journal of Service Research*, Vol. 8 No. 1, pp. 37-47.

Wijnhoven, F. (2002), "The importance of information goods abstractions levels for information commerce process models", *Journal of Electronic Commerce Research*, Vol. 3 No. 2, pp. 40-9.

Willis, R., Marshall, J.N. and Richardson, R. (2001), "The impact of 'branchless banking' on building society branch networks", *Environment and Planning A*, Vol. 33 No. 8, pp. 1371-84.

Yap, K.B., Wong, D.H., Loh, C. and Bak, R. (2010), "Offline and online banking – where to draw the line when building trust in e-banking?", *International Journal of Bank Marketing*, Vol. 28 No. 1, pp. 27-46.

Zwass, V. (2003), "Electronic commerce and organizational innovation: aspects and opportunities", *International Journal of Electronic Commerce*, Vol. 7 No. 3, pp. 7-37.

About the authors

Jane Coughlan is a Lecturer in the department of Information Systems and Computing at Brunel University. She received a BA (Hons) degree in Psychology, and a Master of Research (MRes), both from Manchester University. Her interests lie in user behaviour and the design and usability of multimedia and electronic environments. Jane Coughlan is the corresponding author and can be contacted at: jane-lisa.coughlan@brunel.ac.uk

Rob Macredie has over 15 years of research experience and has worked with a range of organisations, ranging from large, blue-chip companies, through small businesses, to government agencies. His key interest lies in the way in which people and organisations use technology, and his research aims to determine how work can be more effectively undertaken by improving the way we understand how people and technology interact in organisational (and social) settings. He is Professor of Interactive Systems at Brunel University.

Nayna Patel is currently a Lecturer in the department of Information Systems and Computing at Brunel University. She received a BSc (Hons) degree in Computer Science, an MSc in Information Systems and a PhD in the area of Knowledge Management, also from Brunel University. She has a wide range of research interests including: e-learning; interface design; education; business process re-engineering and modelling; and simulation modelling.

Received April 2010
Revised August 2010
Accepted October 2010

Generic technology-based service quality dimensions in banking

Impact on customer satisfaction and loyalty

Shirshendu Ganguli and Sanjit Kumar Roy
Department of Marketing and Strategy, IBS Hyderabad, IFHE University, Hyderabad, India

Abstract

Purpose – This paper aims to identify the generic service quality dimensions of technology-based banking and to examine the effect of these dimensions on customer satisfaction and customer loyalty.

Design/methodology/approach – The generic service quality dimensions are identified using an exploratory factor analysis (EFA). Next the reliability and validity of the factors and customer satisfaction and customer loyalty are established through confirmatory factor analysis (CFA) using AMOS 16.0 s/w. The related hypotheses were tested using structural equation modeling using AMOS 16.0.

Findings – The paper identifies four generic service quality dimensions in the technology-based banking services – customer service, technology security and information quality, technology convenience, and technology usage easiness and reliability. It was found that customer service and technology usage easiness and reliability have positive and significant impact on customer satisfaction and customer loyalty. It was also found that technology convenience and customer satisfaction have significant and positive impact on customer loyalty.

Practical implications – These dimensions of service quality should be viewed as the levers of improving perceived service quality with respect to technology-based banking in the minds of its current customers. Examining the service quality dimensions' impact on customer satisfaction and customer loyalty for technology-based banking can offer banks valuable insights regarding which aspects of the service to focus on in order to improve customer satisfaction and loyalty towards the firms.

Originality/value – This paper introduces the concept of generic service quality and its significance for customer satisfaction and loyalty in case of technology-based banking wherein technology is used to deliver services.

Keywords Communication technologies, Banks, Customer services quality, Factor analysis, Linear structure equation modelling

Paper type Research paper

Introduction

Consumer confidence has been adversely affected as a result of the global economic slowdown and turbulence in the financial markets all across the world. In this current business scenario, the banking industry has become highly competitive. Information technology (IT) is extensively used in this competitive environment to deliver banking services to the consumers. In fact, rise of information technologies and the internet in particular, have changed the consumption process of retail banking as human-human interactions in service delivery is becoming increasingly redundant (Bitner *et al.*, 2000). So traditional banking or branch banking is increasingly being replaced by the technology-based banking (e.g. usage of ATMs, internet and phone banking). Hence

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
pp. 168-189

0265-2323
DOI 10.1108/02652321111107648

human-human interactions or face-to-face interactions between customers and bank employees are being replaced by interaction of customers with technology. In fact a large number of IT tools are utilized to increase the efficiency and effectiveness of service delivery (Marshall, 2006). With the patterns of consumer behavior changing with the increasing use of technology in the delivery of banking services, there is a need to cultivate customers' confidence in using the tech-based services. This is so because customers may not be ready to avail the tech-based service delivery and there is proof of growing customer frustration while interacting with the technology based service delivery interfaces (Parasuraman, 2000).

Since the products offered to the customers of a bank are more or less standardized in nature, banks are feeling an increasing need to differentiate themselves from the competitors on other criteria that can influence customer satisfaction and loyalty. This is so because customer satisfaction and loyalty has been shown to be of utmost importance for firm performance in the long run (Hallowell, 1996). In order to increase the customer confidence in the capabilities of a service provider customer satisfaction and customer loyalty are the key factors considered in the existing literature (Dick and Basu, 1994; Gerpott *et al.*, 2001). In this context the importance of technology based service delivery is increasing. The developments in technology have provided the service companies with a weapon which helps them to design and deliver superior services to customers and thus in turn boost their confidence in the service provider (Surjadjaja *et al.*, 2003). There are several other competitive advantages like entry barrier creation, productivity enhancement and revenue increase which are associated with technology adoption by service companies (Fitzsimmons and Fitzsimmons, 1997). As a result the perception of customers regarding service quality of technology banking has gained importance because service quality has been shown to be a strong predictor of customer satisfaction and loyalty (Andreassen and Lindestad, 1998; Cronin and Taylor, 1992; Dabholkar *et al.*, 2000; Dean, 2002; Zeithaml *et al.*, 1996).

The marketing literature is replete with models on the measurement of customer perceptions of service quality (Cronin and Taylor, 1992; Parasuraman *et al.*, 1988; Parasuraman *et al.*, 2005). Studies have also examined the relationship of customer satisfaction and customer loyalty with service quality (Andreassen and Lindestad, 1998; Cronin and Taylor, 1992; Dabholkar *et al.*, 2000; Zeithaml *et al.*, 1996). Even in the banking sector research has examined the impact of service quality on customer satisfaction and loyalty (Krepapa *et al.*, 2003; Levesque and McDougall, 1996; McDougall and Levesque, 2000; Ndubisi and Wah, 2005). With the emergence of technology based banking, studies have also looked at the perceptions of customers regarding the service quality of technology banking (Al-Hawari *et al.*, 2005; Curran and Meuter, 2005).

However, most of the studies related to service quality of technology based service delivery are about online (or internet based) service quality (Collier and Bienstock, 2006; Parasuraman *et al.*, 2005; Santos, 2003; Van Riel *et al.*, 2001; Wolfinbarger and Gilly, 2003). Even for banking, mostly studies have examined the service quality related to the specific technologies like internet banking, ATM banking and phone banking (Al-Hawari *et al.*, 2005; Curran and Meuter, 2005). So, there is need to identify the service quality dimensions (as perceived by customers) in case of technology based banking irrespective of technology being used (i.e. in generic terms) and how these dimensions affect customer satisfaction and loyalty. Thus we incorporate a comprehensive list of measurement items (from the literature) related to technology-enabled services and use them to provide empirical evidence of the service quality dimensions in case of technology banking. We also consider customer service as a probable dimension of service quality in our study because in modern business scenario customer service is mostly delivered through technology-based channels like calls centers (Dean, 2004; Rafaeli *et al.*, 2008). So, items measuring customer service have also been included in the study (Bitner, 1990; Burgers *et al.*, 2000; Dean, 2004; Johnson and Sirikit, 2002; Rafaeli *et al.*, 2008). Hence, this research provides a significant contribution to the banking services literature by identifying the service quality dimensions for technology banking (in generic terms – which makes it applicable for any type of technology) and observing their impact on customer satisfaction and loyalty. Our research findings can offer useful and practical guidelines to the managers of banking services as effective management of technology based service delivery in banking requires an in-depth understanding of customers' mental representations of consumption experiences (Oliver, 1993), especially with consumer behavior patterns going through a change due to infusion of technology in service delivery.

Literature on service quality clearly highlights that a large body of research exist on the service quality dimensions of technology enabled services and also on technology based banking, as well as on the topic of impact of service quality on customer satisfaction and loyalty. However, not much attention is paid on identifying the service quality dimensions of technology banking in generic terms and studying the impact of those dimensions on customer satisfaction and loyalty. Hence, the objectives of this study are twofold:

(1) To identify the generic service quality dimensions of technology based banking.

(2) To examine the effect of the service quality dimensions on customer satisfaction and customer loyalty.

The remainder of the paper is organized as follows: first, we review the existing literature on the constructs of service quality, service quality in technology-enabled services, customer satisfaction and loyalty, and the impact of service quality on customer satisfaction and loyalty. Next, the article discusses the research methodology used in the paper as well as the survey instrument used in data collection. Finally, we present the results of our analysis followed by a discussion of the findings and managerial implications.

Literature review

Service quality concept

Service quality has been defined in services marketing literature as an overall assessment of service by the customers. Perceived service quality is believed to be resulting from comparison between customers' prior expectations about the service and their perceptions after actual experience of service performance (Asubonteng *et al.*, 1996; Parasuraman *et al.*, 1985). Service quality has been defined by the practitioners in terms of key dimensions that customers use while evaluating the services (Lewis and Booms, 1983). Conceptualization of service quality should include both the service delivery process (Parasuraman *et al.*, 1985) as well as the service outcomes (Lehtinen and Lehtinen, 1991). Grönroos (1984) offered a service quality model with dimensions of technical quality (what consumer gets), functional quality (how consumer gets the service) and corporate image (how consumers perceive the firm and its services). Similarly, Lehtinen and Lehtinen (1991) offered another model with three dimensions of service quality: physical, interactive and corporate. Physical quality is about the quality of physical products involved in service delivery and consumption. Interactive dimension refers to the interaction between the customers and the service organization employees. Corporate quality refers to the corporate image as perceived by the customers. The service quality literature has also highlighted that service quality can also be treated as a second order construct consisting of interaction, physical environment and outcome quality (Brady and Cronin, 2001).

Service quality in technology-enabled services

In case of technology-enabled services, research has identified new dimensions of service quality (different from the traditional service quality dimensions), such as automated search, communication among customers, information acquisition, content, mass customization, and ease of use (Bailey and Pearson, 1983; Doll and Torkzadeh, 1988; Peterson *et al.*, 1997). As consumers' willingness to use and adapt to the new technologies affect their perceptions of service quality, unique scales such as technology anxiety (Meuter *et al.*, 2003) and technology readiness index (Parasuraman, 2000) are also used for the measurement of service quality in technology-enabled services. Parasuraman *et al.* (2005) developed a multi-item scale for assessment of electronic service quality, which they named as E-S-QUAL. The four dimensions of E-S-QUAL are efficiency, fulfillment, system availability and privacy. Service recovery is also an important factor affecting service quality perception of customers in technology-based services. Hence, Parasuraman *et al.* (2005) also developed a scale for electronic service recovery quality (E-RecS-QUAL) which consists of three dimensions – responsiveness, compensation and contact.

Van Riel *et al.* (2001) identified user interface, core service and supplementary services as the crucial dimensions of e-service quality in the case of internet-enabled businesses. E-service quality can also be considered from the perspective of process, outcome and recovery quality (Collier and Bienstock, 2006). Other dimensions considered to measure e-service quality are website appearance, ease of use, linkage, layout and content, reliability, efficiency, support, communication, security, incentives, performance, feature, storage capability, serviceability, trust, responsiveness, customization, web store policies, reputation, assurance and empathy (Madu and Madu, 2002; Santos, 2003). Self-service technology (SST) and call centers (customer service) are the other important research areas related to technology-enabled services. Depending on the technology interface, SSTs can be categorized into the types of telephone, internet, interactive kiosks (e.g. ATM) and video/CD (Meuter *et al.*, 2000). Consumer perceptions of service quality vary depending on the specific type of SST used (Curran and Meuter, 2005). For call centers, dimensions used to judge quality are adaptiveness, assurance, offering of explanations, empathy, authority, educating customers and personalization (Burgers *et al.*, 2000; Rafaeli *et al.*, 2008). Besides that, customer feedback, customer focus and time taken to respond have been also used to measure service quality of call centers (Danaher and Gallagher, 1997; Dean, 2002, 2004).

In case of electronic banking, Al-Hawari *et al.* (2005) identified five dimensions of service quality, which are ATM quality, telephone banking quality, Internet banking quality, customer perception of core service and customer perception of price. For online banking Yang *et al.* (2004) found out the following dimensions of service quality – reliability, responsiveness, competence, ease of use, security and product portfolio. Besides these other dimensions identified for technology banking are accuracy, feedback/complaint management, queue management, accessibility, personalization/customization and customer service (Joseph *et al.*, 1999; Joseph and Stone, 2003).

Customer satisfaction and loyalty

Customer satisfaction has been studied extensively in the field of marketing (Anderson *et al.*, 2004; Fornell, 1992; Oliver, 1980). It is one of the most commonly used customer-oriented metrics by managers because of its generic nature and its universal measurability for all the types of products and services (Gupta and Zeithaml, 2006). In the traditional sense, satisfaction was considered to be transaction-specific construct which resulted from immediate post purchase judgment or affective reaction (Oliver, 1993). Customer satisfaction is also considered from a cumulative satisfaction perspective and is defined as customer's overall experience to date with a product or service provider (Johnson *et al.*, 2001; Krepapa *et al.*, 2003). Most of the customer satisfaction studies are now using this cumulative satisfaction concept (Gupta and Zeithaml, 2006). Another important customer metric is customer loyalty. Many researchers have used service recommendation to other customers as a proxy for customer loyalty (Caruana, 2002; Collier and Bienstock, 2006; Dabholkar *et al.*, 2000; Ganesh *et al.*, 2000; Reichheld, 2003). Besides recommendation other items which have been used extensively for measurement of customer loyalty are consideration of the company as the first choice service provider (Caruana, 2002; Zeithaml *et al.*, 1996) and continuing to do business with the same company (Caruana, 2002; Ganesh *et al.*, 2000; Johnson *et al.*, 2001; Olorunniwo and Hsu, 2006; Van Riel *et al.*, 2001; Zeithaml *et al.*, 1996).

Impact of service quality on customer satisfaction and loyalty

Service quality is found to be a strong predictor of customer satisfaction (Cronin and Taylor, 1992; Cronin *et al.*, 2000; Dabholkar *et al.*, 2000; Spreng and Mackoy, 1996). Research in different industries have investigated the relationship between service quality (its dimensions) and customer satisfaction – telecommunications (Woo and Fock, 1999); restaurants (Gilbert *et al.*, 2004); hospitals (Andaleeb, 1998); hotel services (Voss *et al.*, 1998); travel agencies (Bitner, 1990); internet services (Kim and Lim, 2001; Van Riel *et al.*, 2001); multiple industries (Bitner *et al.*, 2000). In traditional retail banking service quality dimensions of relational performance, core performance and features performance were found to be significant predictors of customer satisfaction (Levesque and McDougall, 1996). Various studies have been conducted in similar area, where in banking service quality dimensions have been tested as predictors of customer satisfaction (Krepapa *et al.*, 2003; McDougall and Levesque, 2000; Ndubisi and Wah, 2005). In case of automated banking service quality dimensions have been found to affect customer satisfaction (Al-Hawari and Ward, 2006). Hence we propose the following hypothesis:

H1. Generic service quality dimensions of technology-based banking have direct positive effect on customer satisfaction.

Recommendation is being used in many studies as a proxy for customer loyalty (Caruana, 2002; Collier and Bienstock, 2006; Dabholkar *et al.*, 2000), and it has been shown empirically that service quality has a direct effect on recommendation (Johnson and Sirikit, 2002; Levesque and McDougall, 1996; Parasuraman *et al.*, 2005; Zeithaml *et al.*, 1996). The effects of different service quality dimensions on loyalty has also been tested in different service contexts of package tour operators (Andreassen and Lindestad, 1998), call centers (Dean, 2002), multi-service scenario (Zeithaml *et al.*, 1996) and internet services (Parasuraman *et al.*, 2005). Besides that customer satisfaction also affects customer loyalty (Aydin and Ozer, 2005; Kim *et al.*, 2004). Previous research has suggested that the quality of customer's service experience aids them to develop positive value perceptions about the service provider. The cognitive evaluation of the different service quality dimensions will lead to a favorable behavioral response from the customer (Brady *et al.*, 2002; Carrillat *et al.*, 2009). Hence we propose the following hypotheses:

H2. Customer satisfaction has a direct positive effect on customer loyalty.

H3. Generic service quality dimensions of technology-based banking have direct positive effect on customer loyalty.

Methodology

Measurement instrument

The survey instrument was developed based on literature review. As shown in Table I, the variables included in the study have been adapted from the existing literature. As we are not considering a specific technology like ATM or internet, but treating the technology in generic terms the items used were adopted from different studies. The first 18 items in the first section are general items related to technology-enabled service quality and the next nine items are items related to customer service and problem solving capabilities which are done mostly through technology (e.g. call center, online chat, e-mail etc.). Second and third sections of the instrument have items measuring customer satisfaction and loyalty. The statements in the questionnaire were refined based on the banking context chosen for this study.

Sampling and data collection

Data were collected through online questionnaire from the undergraduate students of a University in the Massachusetts state of the USA. Respondents were randomly chosen from the list of undergraduate students. This student sample was chosen because they are heavy users of technology banking as they are staying in the campus far away from the city. In all 336 students filled up the questionnaire online. Wang *et al.* (2001) argue that the undergraduate and graduate students are not different from other tech-savvy customers in terms of psychological processes. Agarwal and Karahanna (2002) and Gefen *et al.* (2003) also contend that students are the most innovative users of technology. Of the 336 responses, 325 were usable, resulting in a 96.7 percent response rate, which is more than reasonable for a survey of this type. Respondents were the customers of different banks. Respondents were asked to state their level of agreement with the series of statements stated in Table I using a seven-point Likert scale ranging from "strongly disagree" to "strongly agree." The detailed sample characteristics are shown in Table II.

Constructs	Measurement items
Service quality items	X1. The technology provided by my bank is easy to use (Chen and Hitt, 2002; Dabholkar and Bagozzi, 2002; Doll and Torkzadeh, 1988; Joseph *et al.*, 1999; Meuter *et al.*, 2000)
	X2. The technology provided by my bank is user-friendly (Doll and Torkzadeh, 1988; Parasuraman *et al.*, 2005; Van Riel *et al.*, 2001)
	X3. The technology provided by my bank works accurately and is error-free (Doll and Torkzadeh, 1988; Joseph *et al.*, 1999; Van Riel *et al.*, 2001; Yang *et al.*, 2004)
	X4. My bank's technology is reliable (Dabholkar and Bagozzi, 2002; Joseph *et al.*, 1999; Yang *et al.*, 2004)
	X5. My bank's technology never fails (Meuter *et al.*, 2000; Parasuraman, 2000)
	X6. I feel safe using my bank's technology (Parasuraman, 2000; Yang *et al.*, 2004)
	X7. I feel that the risk associated with my bank's technology is low (Yang *et al.*, 2004)
	X8. My personal information exchanged while using technology is not misused by my bank (Kim and Lim, 2001; Parasuraman *et al.*, 2005; Yang *et al.*, 2004)
	X9. My bank's technology is personalized (Bitner *et al.*, 2000; Chen and Hitt, 2002; Joseph *et al.*, 1999)
	X10. My bank's technology recognizes me by name (Bitner *et al.*, 2000; Joseph *et al.*, 1999)
	X11. My bank's technology provides the precise information I need (Doll and Torkzadeh, 1988; Kim and Lim, 2001; Van Riel *et al.*, 2001)
	X12. My bank's technology provides sufficient information (Doll and Torkzadeh, 1988; Kim and Lim, 2001; Van Riel *et al.*, 2001)
	X13. My bank's technology provides the reports I need (Doll and Torkzadeh, 1988)
	X14. My bank's technology is accessible beyond regular business hours (Joseph *et al.*, 1999; Meuter *et al.*, 2000; Parasuraman, 2000; Parasuraman *et al.*, 2005)
	X15. My bank's technology gives me more freedom of mobility (Meuter *et al.*, 2000; Parasuraman, 2000)
	X16. I find it more convenient to use technology than interacting with branch employees (Meuter *et al.*, 2000)
	X17. My bank's technology allows me to complete transactions quickly (Joseph *et al.*, 1999; Kim and Lim, 2001; Parasuraman *et al.*, 2005)
	X18. My bank's technology saves me a lot of time, especially when I am pressed for time (Meuter *et al.*, 2000)
	X19. When I contact my bank's customer service (e.g. call centre – either through phone or online), my requests are always anticipated properly (Burgers *et al.*, 2000; Rafaeli *et al.*, 2008)
	X20. When I contact my bank's customer service, I am offered proper explanations (Burgers *et al.*, 2000; Dean, 2004; Rafaeli *et al.*, 2008)
	X21. When I contact my bank's customer service, the representatives are supportive (Dean, 2004; Rafaeli *et al.*, 2008)
	X22. When I contact my bank's customer service, the representatives offer personalized information (Burgers *et al.*, 2000; Rafaeli *et al.*, 2008)

(*continued*)

Table I.
Measurement of variables

Constructs	Measurement items
	X23. When I contact my bank's customer service, my calls are always answered promptly (Danaher and Gallagher, 1997; Dean, 2004)
	X24. When there are problems, my bank's customer service people are sympathetic and reassuring (Bitner, 1990; Gilbert *et al.*, 2004; Johnson and Sirikit, 2002; Lai *et al.*, 2007)
	X25. My bank employees are knowledgeable enough to resolve the problems (Bitner, 1990; Yang *et al.*, 2004)
	X26. My bank resolves my complaints quickly (Joseph *et al.*, 1999; Parasuraman *et al.*, 2005; Sharma *et al.*, 1999; Yang *et al.*, 2004)
	X27. My bank offers a fair compensation for its mistakes (Bitner, 1990; Dabholkar *et al.*, 1996; Parasuraman *et al.*, 2005)
Customer satisfaction	SAT1. Overall I am satisfied with my bank (Ganesh *et al.*, 2000; Krepapa *et al.*, 2003; Woo and Fock, 1999)
	SAT2. I think I did the right thing when I chose this bank (Caruana *et al.*, 2000; Cronin *et al.*, 2000; Oliver, 1980; Olorunniwo and Hsu, 2006)
	SAT3. My bank's services meet my expectations (Aydin and Ozer, 2005; Cronin *et al.*, 2000; Levesque and McDougall, 1996; McDougall and Levesque, 2000)
	SAT4. I am delighted with my bank (Collier and Bienstock, 2006; Ndubisi and Wah, 2005; Olorunniwo and Hsu, 2006; Voss *et al.*, 1998)
Customer loyalty	LOY1. I would recommend my bank to others (Aydin and Ozer, 2005; Collier and Bienstock, 2006; Dabholkar *et al.*, 2000; Ganesh *et al.*, 2000; Johnson *et al.*, 2001; Kim *et al.*, 2004; Reichheld, 2003; Zeithaml *et al.*, 1996)
	LOY2. I will always consider this bank as my first choice (Caruana, 2002; Zeithaml *et al.*, 1996)
	LOY3. I expect to do more business with my bank in the future (Caruana, 2002; Ganesh *et al.*, 2000; Johnson *et al.*, 2001; Kim *et al.*, 2004; Olorunniwo and Hsu, 2006; Van Riel *et al.*, 2001; Zeithaml *et al.*, 1996)

Table I.

Data analysis and results

Data analysis proceeds in two steps. First, the exploratory factor analysis is used to identify the underlying dimensions of service quality for technology-based banking. For this the sample was split into two sub-samples: sample 1 ($n = 150$) and sample 2 ($n = 175$). Next, an exploratory factor analysis was performed on the 27 items of the measurement scale using the principal component analysis with varimax rotation. Next, confirmatory factor analysis was used to confirm the factor structure of service quality. The descriptive statistics of the 27 service quality items as well as four customer satisfaction and three customer loyalty measurement items are shown in Table III.

Exploratory factor analysis. In the first stage an exploratory factor analysis was performed on sample 1 using the 27-variables related to the service quality of technology banking. The criteria used for factor extraction is twofold, i.e. the eigen value should be greater than one but more importantly the factor structure should be meaningful, useful and conceptually sound (Pett *et al.*, 2003). Results of the factor analysis are shown in Table IV.

Table II.
Demographic profiles and usage patterns of respondents

	%
Gender	
Male	46.2
Female	53.8
Age [Average – 21.2 years]	
20 years and less	36.93
21 years	39.73
22 years	17.07
Greater than 22 years	6.27
Monthly income	
Less than $1,200	85.41
Between $1,200-$2,500	9.96
Between $2,501-$7,500	3.21
Greater than $7,500	1.42
Period for which respondents are customers of their bank	
Less than 6 months	2.1
Between 6-12 months	4.9
More than 1 – up to 3 years	39.86
More than 3 years	53.14
Frequency of monthly usage	
Up to 5 times	25
More than 5 – up to 10 times	38.54
More than 10 – up to 20 times	21.88
More than 20 times	14.58
Service types used	
Checking account	98.97
Savings account	77.24
Home banking through internet	46.55
Telephone banking	11.38
Stock trading	1.72
Auto loan	2.07
Mortgage	0.34
Others – mainly credit card, ATMs, bill payments	12.76

As can be seen from Table IV, four factors were extracted, accounting for 69 percent of the total variance explained. A total of 24 items loaded properly on the factors. Three items, namely "tech-never fail", "tech-low risk", "tech-recognize by name" were removed because they did not load on any of the factors. Reliability of the factors was calculated using the Cronbach's alpha. A Cronbach's alpha value of greater than or equal to 0.7 is considered acceptable for the factor to be reliable (Hair *et al.*, 2006). In our case all the factors had satisfactory value of Cronbach's alpha. The Cronbach's alpha values of customer satisfaction and customer loyalty are 0.93 and 0.88 which are also acceptable. Hence the factors are reliable.

Variables	Mean	Variance
X1. Tech-EasyToUse	6.05	0.866
X2. Tech-User-friendly	5.98	0.951
X3. Tech-Accuracy	5.67	1.245
X4. Tech-Reliable	5.81	1.072
X5. Tech-NeverFail	5.19	1.919
X6. Tech-Safe	5.91	0.975
X7. Tech-LowRisk	5.70	1.306
X8. Tech-InfoMisuse	5.81	1.040
X9. Tech-Personalize	5.43	1.492
X10. Tech-RecognizeByName	5.39	1.873
X11. Tech-PreciseInfo	5.62	1.197
X12. Tech-SufficientInfo	5.74	0.967
X13. Tech-ProvideReportNeeded	5.72	0.977
X14. Tech-BeyondBusinessHours	6.03	1.137
X15. Tech-Mobility	5.92	1.149
X16. TechOverEmployee	5.86	1.540
X17. Tech-QuickTransactions	6.04	0.953
X18. Tech-SavesTime	5.96	1.209
X19. CS-RequestAnticipated	5.22	1.859
X20. CS-Explanations	5.29	1.751
X21. CS-Supportive	5.33	1.697
X22. CS-PersonalizedInfo	5.29	1.668
X23. CS-PromptAnswer	4.92	2.322
X24. SympatheticProblemSolving	5.10	1.797
X25. Problem-EmployeeKnowledge	5.41	1.468
X26. Problem-QuickResolve	5.19	1.848
X27. Problem-Compensation	4.89	2.057
Satisfaction1-Overall	5.74	1.170
Satisfaction2-RightChoice	5.82	0.971
Satisfaction3-MeetExpectations	5.73	1.194
Satisfaction4-Delighted	5.31	1.729
Loyalty1-Recommend	5.61	1.554
Loyalty2-FirstChoice	5.21	2.259
Loyalty3-MoreBusiness	5.47	1.648

Table III.
Descriptive statistics

On examining the content of the items making up each of the dimensions (factors) we label the factors as shown in Table IV and provide concise definitions for the dimensions:

(1) *Customer service*. The service provided to customers during problem situations and through call centers.

(2) *Technology security and information quality*. Safety in using technology, proper handling of information and quality of information.

(3) *Technology convenience*. Convenience of using technology over the employees as well as speed and time of using technology.

(4) *Technology usage easiness and reliability*. How reliable and easy to use the technology is.

Factors	Measurement items	Factor loadings	Cronbach's Alpha
Technology security and information quality (TechInfoSecure)	Tech-Safe	0.652	0.89
	Tech-InfoMisuse	0.677	
	Tech-Personalize	0.606	
	Tech-PreciseInfo	0.802	
	Tech-SufficientInfo	0.759	
	Tech-ProvideReportNeeded	0.666	
Technology convenience (TechConven)	Tech-BeyondBusinessHours	0.696	0.88
	Tech-Mobility	0.714	
	TechOverEmployee	0.756	
	Tech-QuickTransactions	0.802	
	Tech-SavesTime	0.767	
Technology usage easiness and reliability (TechEaseRel)	Tech-EasyToUse	0.832	0.90
	Tech-User-friendly	0.844	
	Tech-Accuracy	0.641	
	Tech-Reliable	0.728	
Customer service (Cust Service)	CS-RequestAnticipated	0.755	0.95
	CS-Explanations	0.778	
	CS-Supportive	0.789	
	CS-PersonalizedInfo	0.739	
	CS-PromptAnswer	0.700	
	SympatheticProblemSolving	0.746	
	Problem-EmployeeKnowledge	0.612	
	Problem-QuickResolve	0.692	
	Problem-Compensation	0.524	

Table IV.
Rotated factor matrix for technology-based service quality

Confirmatory factor analysis. After identifying four clear factors through exploratory factor analysis, the next stage is to confirm the factor structure on sample 2. Structural equation modeling (SEM) using AMOS 16.0 was used to perform the confirmatory factor analysis. Confirmatory factor analysis revealed that the measurement items loaded in accordance with the pattern revealed in the exploratory factor analysis.

Model fit

The measurement model indicated an acceptable model fit of the data ($\chi^2 = 682.8$, $df = 241$, $p < 0.001$; $\chi^2/df = 2.83$ (<5); $CFI = 0.92$; $TLI = 0.92$; $IFI = 0.93$; $NFI = 0.90$; $PNFI = 0.77$; $PCFI = 0.81$ and $RMSEA = 0.08$). In addition, all the indicators loaded significantly on the latent constructs. The values of the fit indices indicate a reasonable fit of the measurement model with data (Byrne, 2001, pp. 79-86). In short the measurement model confirms to the four-factor structure of the service quality instrument in case of technology banking.

Next we also ran a confirmatory factor analysis on the measurement model consisting of the quality dimensions, customer satisfaction and customer loyalty. The measurement model revealed an adequate model fit with the data (($\chi^2 = 1059.02$, $df = 414$, $p < 0.001$; $\chi^2/df = 2.55$ (<5); $CFI = 0.92$; $TLI = 0.92$; $IFI = 0.92$; $NFI = 0.88$; $PNFI = 0.78$; $PCFI = 0.82$ and $RMSEA = 0.07$).

Reliability of the measurement instrument

The Cronbach's alpha for the service quality instrument was 0.89 which is acceptable and shows that the instrument is reliable. Further evidence of the reliability of the scale is provided in Table V, which shows the composite reliability and average variance extracted scores of the different factors obtained and customer satisfaction and customer loyalty scales (Fornell and Larcker, 1981; Hair *et al.*, 2006). Composite reliability (CR) of all the latent variables is greater than the acceptable limit of 0.70 (Carmines and Zeller, 1988). The average-variance extracted for all the factors is greater than or equal to 0.5 which is acceptable (Fornell and Larcker, 1981).

Construct validity

Construct validity is the extent to which a set of measured variables actually reflects the latent construct they are designed to measure (Hair *et al.*, 2006). Construct validity is established in this study by establishing the face validity, convergent validity and discriminant validity.

Constructs	Measurement items	Standardized estimates	*p*-value	AVE	CR
Cust Service	X27	0.737	*		
	X26	0.869	*		
	X25	0.832	*	0.52	0.91
	X24	0.856	*		
	X23	0.760	*		
	X22	0.849	*		
	X21	0.855	*		
	X20	0.859	*		
	X19	0.847	*		
TechInfoSecure	X13	0.793	*		
	X12	0.915	*		
	X11	0.890	*		
	X8	0.594	*	0.50	0.86
	X6	0.621	*		
	X9	0.608			
TechConven	X14	0.690	*		
	X15	0.750	*	0.56	0.86
	X16	0.709	*		
	X17	0.919	*		
	X18	0.816	*		
TechEaseRel	X1	0.932	*		
	X2	0.977	*	0.67	0.88
	X3	0.633	*		
	X4	0.732	*		
Customer satisfaction	Sat1	0.918	*	0.76	0.92
	Sat2	0.856	*		
	Sat3	0.910	*		
	Sat4	0.887	*		
Customer loyalty	Loy1	0.899	*	0.56	0.79
	Loy2	0.832	*		
	Loy3	0.783	*		

Note: *Implies that the factor loadings are significant at $p < 0.001$

Table V. Measurement model results

Face validity was established by adopting the measurement items used in the study from the existing literature and adapting the same to the present research context.

Convergent validity was assessed by examining the factor loadings and average variance extracted of the constructs as suggested by Fornell and Larcker (1981). All the indicators had significant loadings onto the respective latent constructs ($p < 0.001$) with values varying between 0.594 and 0.977 (Table V). In addition, the average variance extracted (AVE) for each construct is greater than or equal to 0.50, which further supports the convergent validity of the constructs.

Fornell and Larcker (1981) states that discriminant validity can be assessed by comparing the average variance extracted (AVE) with the corresponding inter-construct squared correlation estimates. From Table VI it can be inferred that the square root of the AVE values of all the service quality factors and customer satisfaction and customer loyalty are greater than the inter-construct correlations which supports the discriminant validity of the constructs. Thus, the measurement model reflects good construct validity and desirable psychometric properties.

Impact of service quality dimensions on customer satisfaction and customer loyalty

H1 to *H3* were examined by using the structural equation modeling (using AMOS 16.0). The structural model with the service quality dimensions (obtained earlier in the study), customer satisfaction and customer loyalty is shown in Figure 1.

Results of the structural equation modeling indicate an adequate model fit with the data ($\chi^2 = 1059.02$, df = 255, at $p < 0.001$; CFI = 0.92; TLI = 0.91; IFI = 0.92; RFI = 0.86; NFI = 0.89 and RMSEA = 0.07). Results of hypotheses testing are shown in Table VII.

Table VII reveals that customers' satisfaction judgment is determined, in order of importance by "customer service" (c = 0.481, at $p < 0.001$) and "technology usage easiness and reliability" (c = 0.188, at $p < 0.01$). Results also indicate that customer loyalty is influenced positively and significantly by customer satisfaction (coefficient (c) = 0.838, at $p < 0.001$), "customer service" (c = 0.132, $p < 0.01$), "technology convenience" (c = 0.122, at $p < 0.05$) and "technology usage easiness and reliability" (c = 0.107, at $p < 0.05$) in order of importance.

Discussion and managerial implications

The current research makes important contributions to the field of banking services. Our first contribution lies in the identification of the service quality dimensions related to technology banking in generic terms (i.e. irrespective of the technology being used

	Cust_Service	TechInfoSecure	TechConven	TechEaseRel	CS	CL
Cust_Service	0.72					
TechInfoSecure	0.61	0.70				
TechConven	0.36	0.67	0.74			
TechEaseRel	0.39	0.62	0.67	0.81		
CS	0.61	0.51	0.40	0.45	0.87	
CL	0.64	0.52	0.43	0.40	0.62	0.74

Note: Diagonal elements in the correlation matrix of constructs are the square root of the AVE values; For discriminant validity to be present the diagonal elements should be greater than the off diagonal

Table VI.
Discriminant validity

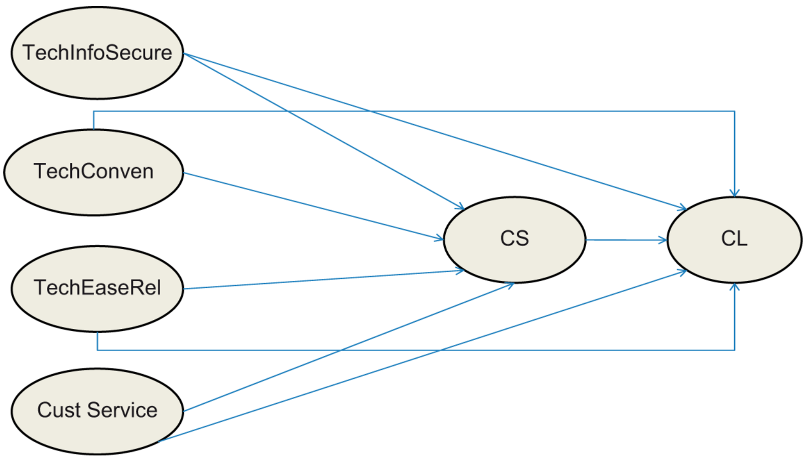


Figure 1.
The structural model

Table VII.
Results of hypotheses testing

Hypotheses	Hypothesized paths	Standardized path coefficients	*p*-value	Results
H1. Service quality/customer satisfaction	CS ⇐ TechEaseRel	0.188	0.009**	Accepted
	CS ⇐ TechConven	0.052	0.520 (NS)	Rejected
	CS ⇐ Cust Service	0.481	***	Accepted
	CS ⇐ TechInfoSecure	0.065	0.451 (NS)	Rejected
H2. Customer satisfaction/customer loyalty	CL ⇐ CS	0.838	***	Accepted
H3. Service quality/customer loyalty	CL ⇐ TechEaseRel	0.107	0.035*	Accepted
	CL ⇐ TechConven	0.122	0.030*	Accepted
	CL ⇐ Cust Service	0.132	0.009**	Accepted
	CL ⇐ TechInfoSecure	−0.005	0.935 (NS)	Rejected

Notes: *Implies significant at $p < 0.05$; **Implies significant at $p < 0.01$; ***Implies significant at $p < 0.001$; NS implies "not significant"

by the banks for service delivery). This study provides insights into the consumption process of the retail banking customers in today's changed scenario of banking services which is leveraging upon technology for service delivery and using it as a weapon for competitive differentiation. The dimensions identified in this study are "technology security and information quality", "technology convenience", "technology usage easiness and reliability" and "customer service". These dimensions will act as guidelines for the managers of banking services as it will help them to understand the particular dimensions that customers consider while evaluating the service delivery process of banks using technology. This is particularly important because dipping customer confidence due to inadequate knowledge of handling technology properly makes it necessary for managers to have proper knowledge of customer's perceptions of service quality dimensions in technology based banking. The dimensions identified in this study can be utilized by the service providers to project the convenience of using technology in banking and highlight their security and reliability as well in order to boost the customer confidence. This will aid in reducing customers' perceived risk in using the technology-based banking services which in turn will instill their confidence in such services (Shostack, 1977). However, the degree of emphasis placed on these dimensions depends on the objectives of the banks.

As the consumer behavior patterns are changing with the adoption of technology by banks in their service delivery boosting of customer confidence is necessary so that customers accept these new channels of service delivery. In this regard customer satisfaction and loyalty are key indicators of customers' confidence in technology-based banking. Hence, the second contribution which we make is examining the differential impact of these generic service quality dimensions of the satisfaction judgments of customers. This is in line with the service quality literature linking perceived service quality and customer satisfaction (Dabholkar, 1995). Finally, we also contribute to the literature by examining the differential impact of these service quality dimensions on customer loyalty in the banking services. This is consistent with the loyalty literature (Brady *et al.*, 2002; Carrillat *et al.*, 2009).

Among the service quality dimensions related to technology banking the first one is labeled as "customer service" as it consists of the items related to call center quality (Burgers *et al.*, 2000; Dean, 2004; Rafaeli *et al.*, 2008) and problem solving (Bitner, 1990; Dabholkar *et al.*, 1996; Johnson and Sirikit, 2002; Joseph *et al.*, 1999). This dimension highlights the importance placed by customers on the service provided to them through call centers (phone, e-mail etc.) and specially during problem situations. In the technology based transactions, one of the most crucial hurdles in the path of popularity of technology is the customers' concerns about security as well as quality and proper handling of information (Doll and Torkzadeh, 1988; Kim and Lim, 2001; Parasuraman, 2000; Parasuraman *et al.*, 2005; Van Riel *et al.*, 2001; Yang *et al.*, 2004) and as the next dimension deals with such items it has been labeled as "technology security and information quality".

The third dimension is labeled as "technology convenience" which consists of items showing the perceived usefulness of using the technology channel over and above the other channels (Joseph *et al.*, 1999; Meuter *et al.*, 2000; Parasuraman, 2000; Parasuraman *et al.*, 2005). The last dimension consists of items related to easiness to use technology and the reliability of technology (Dabholkar and Bagozzi, 2002; Doll and Torkzadeh, 1988; Joseph *et al.*, 1999; Meuter *et al.*, 2000; Parasuraman, 2000; Van Riel *et al.*, 2001) and thus we named it as "technology usage easiness and reliability".

The above discussion on different dimensions obtained in this study highlights that service quality for technology based banking (for all types of technologies), has some universal aspects such as convenience of technology use, security in transactions, the quality of information delivered through technology channels, the ease of use and the overall reliability of technology based banking. Moreover the customer service delivered using the technology channels is also an important factor in determining the customer satisfaction and customer loyalty. All these dimensions are applicable to different technology channels used by banks for example, ATMs, Internet banking, and phone banking. Hence we have termed these dimensions as generic in nature. Since these dimensions are generic in nature they will be applicable even for any future technologies introduced in banking sector.

The study has also found the impact of these generic service quality dimensions on customer satisfaction and customer loyalty. We found that "technology usage easiness and reliability" and "customer service" affects customer satisfaction positively and significantly. Owing to high usage of technology by bank customers in today's world the role of customer service has become more important as customers are interacting through some technology and not any human being. In fact provision of proper customer service shapes the consumer behavior patterns significantly. Our result also conforms to this fact as "customer service" dimension has relatively higher impact on customer satisfaction than "technology usage easiness and reliability". However, the importance of the ease of use of technology as well as its reliability is no less. Because only if customers perceive the technology channel to be easy to use and reliable their consumption experience will be positive and they will be satisfied with the use of technology based-banking, thus giving a boost to their confidence. We also found that customer satisfaction has a positive and significant impact on customer loyalty. This is hardly a new finding but it is all the more important for technology based banking because only if a customer is satisfied with a previous encounter with the technology channel he will reuse the same for future transactions.

Another important finding of the study is the impact of service quality dimensions on customer loyalty. We found that "customer service" has a higher impact on customer loyalty (which impacts their future consumption patterns) in relation to other factors just like it has on customer satisfaction. However, "technology usage easiness and reliability" and "technology convenience" are also affecting customer loyalty significantly and positively. This shows that customers become loyal to the banks (an indication of changing consumer behavior pattern) only if the technology provided is easy to use and reliable as well as convenient.

The current study provides some useful insights for managers of banking services. The service quality dimensions identified in this study are related to technology based banking. This is useful for the service manager of a bank because he can measure the perceptions of service quality on these dimensions to get a broad indication of the bank's technology related service quality performance. As the dimensions identified in this study are generic in nature these can be adopted by the service managers to measure the perceptions of customers whenever a new form of technology is introduced in the banking services sector. These dimensions can be used to track the relative performance of a bank with respect to their competitors over a period of time. These dimensions can also be used to segment and profile the customers based on their perceptions about service quality and hence targeted communication can be designed to educate them on technology usage. The positive impact of service quality dimensions on customer satisfaction and customer loyalty has been highlighted in the literature (Dagger *et al.*, 2007). Hence, a fair understanding of the impact of these dimensions on customer satisfaction and loyalty can help the service managers of banks to formulate proper strategies to instill customer confidence. This study found the differential impacts of the generic technology based service quality dimensions on the satisfaction judgments of customers and their loyalty towards the banks. This will help the managers of banking services to properly design the technology channel of service delivery with greater emphasis given to those dimensions which impacts customer satisfaction and loyalty significantly. Service managers need to focus on making their delivery channels reliable and easy to use so that customers feel confident in using them repeatedly and hold positive usage experience. The results also highlight the importance of customer service in creating satisfied and loyal customers. This implies that banks need to resolve any problems faced by customers adequately, especially in the scenario of technology frustrating the customers at interaction interfaces.

Limitations and future research directions

Studying service quality of technology based banking in generic terms is conceptually interesting. The findings of this study can serve as a guide towards further research in this area by exploring other options like testing whether there is a possibility of a multi-tier service quality model for technology based banking services. The same approach can be replicated for other technology-based services like telecommunications, share trading and telemedicine. The application of the service quality dimensions identified in this study cannot be generalized as we have taken only one industry (banking). So to confirm its applicability in other technology based services like telecommunications and share trading and build a universal model of service quality dimensions in technology based services future research should carry out the same study in various other technology based service industries. Moreover a more representative sampling strategy needs to be used by future researchers to generalize the findings of this study. We have used the student sample as a starting point to understand the initial structure of our proposed model.

References

Agarwal, R. and Karahanna, E. (2002), "Time flies when you're having fun, cognitive absorption and beliefs about information technology usage", *MIS Quarterly*, Vol. 23 No. 3, pp. 665-94.

Al-Hawari, M. and Ward, T. (2006), "The effect of automated service quality on Australian banks' financial performance and the mediating role of customer satisfaction", *Marketing Intelligence & Planning*, Vol. 24 No. 2, pp. 127-47.

Al-Hawari, M., Hartley, N. and Ward, T. (2005), "Measuring banks' automated service quality: a confirmatory factor analysis approach", *Marketing Bulletin*, Vol. 16, May, pp. 1-19.

Andaleeb, S.S. (1998), "Determinants of customer satisfaction with hospitals: a managerial model", *International Journal of Health Care Quality Assurance*, Vol. 11 No. 6, pp. 181-7.

Anderson, E.W., Fornell, C. and Mazvancheryl, S.K. (2004), "Customer satisfaction and shareholder value", *Journal of Marketing*, Vol. 68 No. 4, pp. 172-85.

Andreassen, T.W. and Lindestad, B. (1998), "Customer loyalty and complex services: the impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise", *International Journal of Service Industry Management*, Vol. 9 No. 1, pp. 7-23.

Asubonteng, P., McCleary, K.J. and Swan, J.E. (1996), "SERVQUAL revisited: a critical review of service quality", *The Journal of Services Marketing*, Vol. 10 No. 6, pp. 62-81.

Aydin, S. and Ozer, G. (2005), "National customer satisfaction indices: an implementation in the Turkish mobile telephone market", *Marketing Intelligence & Planning*, Vol. 23 No. 5, pp. 486-504.

Bailey, J.E. and Pearson, S.W. (1983), "Development of a tool for measuring and analyzing computer user satisfaction", *Management Science*, Vol. 29 No. 5, pp. 530-45.

Bitner, M.J. (1990), "Evaluating service encounters: the effect of physical surroundings and employee responses", *Journal of Marketing*, Vol. 54 No. 2, pp. 69-82.

Bitner, M.J., Brown, S.W. and Meuter, M.L. (2000), "Technology infusion in service encounters", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 138-49.

Brady, M.K. and Cronin, J.J. (2001), "Some new thoughts on conceptualizing perceived service quality: a hierarchical approach", *Journal of Marketing*, Vol. 65 No. 3, pp. 34-49.

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*, Vol. 55, pp. 17-31.

Burgers, A., Ruyter, K.D., Keen, C. and Streukens, S. (2000), "Customer expectation dimensions of voice-to-voice service encounters: a scale-development study", *International Journal of Service Industry Management*, Vol. 11 No. 2, pp. 142-61.

Byrne, B.M. (2001), *Structural Equation Modeling with AMOS: Basic Concepts, Applications and Programming*, Lawrence Erlbaum Associates, Mahwah, NJ.

Carmines, E.G. and Zeller, R.A. (1988), *Reliability and Validity Assessment*, Sage, Beverly Hills, CA.

Carrillat, F.A., Jaramillo, F. and Mulki, J.P. (2009), "Examining the impact of service quality: a meta-analysis of empirical evidence", *Journal of Marketing Theory and Practice*, Vol. 17 No. 2, pp. 95-110.

Caruana, A. (2002), "Service loyalty: the effects of service quality and the mediating role of customer satisfaction", *European Journal of Marketing*, Vol. 36 Nos 7/8, pp. 811-28.

Caruana, A., Money, A.H. and Berthon, P.R. (2000), "Service quality and satisfaction: the moderating role of value", *European Journal of Marketing*, Vol. 34 Nos 11/12, pp. 1338-52.

Chen, P.Y. and Hitt, L.M. (2002), "Measuring switching costs and the determinants of customer retention in internet-enabled businesses: a study of the online brokerage industry", *Information Systems Research*, Vol. 13 No. 3, pp. 255-74.

Collier, J.E. and Bienstock, C.C. (2006), "Measuring service quality in e-retailing", *Journal of Service Research*, Vol. 8 No. 3, pp. 260-75.

Cronin, J.J. Jr and Taylor, S.A. (1992), "Measuring service quality: a reexamination and extension", *Journal of Marketing*, Vol. 56 No. 3, pp. 55-68.

Cronin, J.J. Jr, Brady, M.K. and Hult, G.T.M. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments", *Journal of Retailing*, Vol. 76 No. 2, pp. 193-218.

Curran, J.M. and Meuter, M.L. (2005), "Self-service technology adoption: comparing three technologies", *Journal of Services Marketing*, Vol. 19 No. 2, pp. 103-13.

Dabholkar, P. (1995), "A contingency framework for predicting causality between customer satisfaction and service quality", *Advances in Consumer Research*, Vol. 22, pp. 101-8.

Dabholkar, P. and Bagozzi, R.P. (2002), "An attitudinal model of technology-based self-service: moderating effects of consumer traits and situational factors", *Journal of the Academy of Marketing Science*, Vol. 30 No. 3, pp. 184-201.

Dabholkar, P., Shepherd, C.D. and Thorpe, D.I. (2000), "A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study", *Journal of Retailing*, Vol. 76 No. 2, pp. 139-73.

Dabholkar, P., Thorpe, D.I. and Rentz, J.O. (1996), "A measure of service quality for retailing stores: scale development and validation", *Journal of the Academy of Marketing Science*, Vol. 24 No. 1, pp. 3-16.

Dagger, T.S., Sweeney, J.C. and Johnson, L.W. (2007), "A hierarchical model of health service quality: scale development and investigation of an integrated model", *Journal of Service Research*, Vol. 10 No. 2, pp. 123-42.

Danaher, P.J. and Gallagher, R.W. (1997), "Modeling customer satisfaction in Telecom New Zealand", *European Journal of Marketing*, Vol. 31 No. 2, pp. 122-33.

Dean, A.M. (2002), "Service quality in call centers: implications for customer loyalty", *Managing Service Quality*, Vol. 12 No. 6, pp. 414-23.

Dean, A.M. (2004), "Rethinking customer expectations of service quality: are call centers different?", *Journal of Services Marketing*, Vol. 18 No. 1, pp. 60-77.

Dick, S.A. and Basu, K. (1994), "Customer loyalty: toward an integrated conceptual framework", *Journal of the Academy of Marketing Science*, Vol. 22 No. 2, pp. 99-113.

Doll, W.J. and Torkzadeh, G. (1988), "The measurement of end-user computing satisfaction", *MIS Quarterly*, Vol. 12 No. 2, pp. 259-74.

Fitzsimmons, J. and Fitzsimmons, M. (1997), *Service Management: Operations Strategy, and Information Technology*, Irwin and McGraw-Hill, New York, NY.

Fornell, C. (1992), "A national customer satisfaction barometer: the Swedish experience", *Journal of Marketing*, Vol. 56 No. 1, pp. 6-21.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measure", *Journal of Marketing Research*, Vol. 18, pp. 39-50.

Ganesh, J., Arnold, M.J. and Reynolds, K.E. (2000), "Understanding the customer base of service providers: an examination of the differences between switchers and stayers", *Journal of Marketing*, Vol. 64 No. 3, pp. 65-87.

Gefen, D., Karahanna, E. and Straub, D.W. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1, pp. 51-90.

Gerpott, T.J., Rams, W. and Schindler, A. (2001), "Customer retention, loyalty, and satisfaction in the German mobile cellular telecommunications market", *Telecommunications Policy*, Vol. 25 No. 4, pp. 249-69.

Gilbert, G.R., Veloutsou, C., Goode, M.M.H. and Moutinho, L. (2004), "Measuring customer satisfaction in the fast food industry: a cross-national approach", *Journal of Services Marketing*, Vol. 18 No. 5, pp. 371-83.

Grönroos, C. (1984), "A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 18 No. 4, pp. 36-44.

Gupta, S. and Zeithaml, V. (2006), "Customer metrics and their impact on financial performance", *Marketing Science*, Vol. 25 No. 6, pp. 718-39.

Hair, J.F. Jr, Black, C.W., Babin, J.B., Anderson, R.E. and Tatham, L.R. (2006), *Multivariate Data Analysis*, 6th ed., Pearson, Upper Saddle River, NJ.

Hallowell, R. (1996), "The relationships of customer satisfaction, customer loyalty and profitability", *International Journal of Service Industries Management*, Vol. 7 No. 4, pp. 27-42.

Johnson, M.D., Gustafsson, A., Andreassen, T.W., Lervik, L. and Cha, J. (2001), "The evolution and future of national customer satisfaction index models", *Journal of Economic Psychology*, Vol. 22 No. 2, pp. 217-45.

Johnson, W.C. and Sirikit, A. (2002), "Service quality in the Thai telecommunication industry: a tool for achieving a sustainable competitive advantage", *Management Decision*, Vol. 40 No. 7, pp. 693-701.

Joseph, M. and Stone, G. (2003), "An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector", *International Journal of Retail & Distribution Management*, Vol. 31 No. 4, pp. 190-202.

Joseph, M., McClure, C. and Joseph, B. (1999), "Service quality in the banking sector: the impact of technology on service delivery", *International Journal of Bank Marketing*, Vol. 17 No. 4, pp. 182-91.

Kim, M.K., Park, M.C. and Jeong, D.H. (2004), "The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services", *Telecommunications Policy*, Vol. 28 No. 2, pp. 145-59.

Kim, S.Y. and Lim, Y.J. (2001), "Consumers' perceived importance of and satisfaction with internet shopping", *Electronic Markets*, Vol. 11 No. 3, pp. 148-54.

Krepapa, A., Berthon, P., Webb, D. and Pitt, L. (2003), "Mind the gap: an analysis of service provider versus customer perceptions of market orientation and the impact on satisfaction", *European Journal of Marketing*, Vol. 37 Nos 1/2, pp. 197-218.

Lai, F., Hutchinson, J., Li, D. and Bai, C. (2007), "An empirical assessment and application of SERVQUAL in mainland China's mobile communications industry", *International Journal of Quality & Reliability Management*, Vol. 24 No. 3, pp. 244-62.

Lehtinen, U. and Lehtinen, J.R. (1991), "Two approaches to service quality dimensions", *The Service Industries Journal*, Vol. 11 No. 3, pp. 287-303.

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.

Lewis, R.C. and Booms, B.H. (1983), "The marketing aspects of service quality", in Berry, L.L., Shostack, G.L. and Upah, G.D. (Eds), *Emerging Perspectives on Services Marketing*, American Marketing Association, Chicago, IL, pp. 99-104.

McDougall, G.H.G. and Levesque, T. (2000), "Customer satisfaction with services: putting perceived value into the equation", *Journal of Services Marketing*, Vol. 14 No. 5, pp. 392-410.

Madu, C.N. and Madu, A.A. (2002), "Dimensions of e-quality", *International Journal of Quality & Reliability Management*, Vol. 19 No. 3, pp. 246-58.

Marshall, L. (2006), "Flying high on service automation", *Customer Relationship Management*, February, pp. 42-3.

Meuter, M.L., Ostrom, A.L., Bitner, M.J. and Roundtree, R. (2003), "The influence of technology anxiety on consumer use and experiences with self-service technologies", *Journal of Business Research*, Vol. 56 No. 11, pp. 899-906.

Meuter, M.L., Ostrom, A.L., Roundtree, R.I. and Bitner, M.J. (2000), "Self-service technologies: understanding customer satisfaction with technology-based service encounters", *Journal of Marketing*, Vol. 64 No. 3, pp. 50-64.

Ndubisi, N.O. and Wah, C.K. (2005), "Factorial and discriminant analyses of the underpinnings of relationship marketing and customer satisfaction", *International Journal of Bank Marketing*, Vol. 23 No. 7, pp. 542-57.

Oliver, R.L. (1980), "A cognitive model of the antecedents and consequences of satisfaction decisions", *Journal of Marketing Research*, Vol. 17 No. 4, pp. 460-9.

Oliver, R.L. (1993), "Cognitive, affective and attribute bases of the satisfaction experiences", *Journal of Consumer Research*, Vol. 20 No. 3, pp. 418-30.

Olorunniwo, F. and Hsu, M.K. (2006), "A typology analysis of service quality, customer satisfaction and behavioral intentions in mass services", *Managing Service Quality*, Vol. 16 No. 2, pp. 106-23.

Parasuraman, A. (2000), "Technology readiness index (TRI): a multiple-item scale to measure readiness to embrace new technologies", *Journal of Service Research*, Vol. 2 No. 4, pp. 307-20.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, Vol. 49 No. 4, pp. 41-50.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-40.

Parasuraman, A., Zeithaml, V.A. and Malhotra, A. (2005), "E-S-QUAL: a multiple-item scale for assessing electronic service quality", *Journal of Service Research*, Vol. 7 No. 3, pp. 213-33.

Peterson, R.A., Balasubramanian, S. and Bronnenberg, B.J. (1997), "Exploring the implications of the internet for consumer marketing", *Journal of the Academy of Marketing Science*, Vol. 25 No. 4, pp. 329-46.

Pett, M.A., Lackey, N.R. and Sullivan, J.J. (2003), *Making Sense of Factor Analysis: The Use of Factor Analysis for Instrument Development in Health Care Research*, Sage Publications, New Delhi.

Rafaeli, A., Ziklik, L. and Doucet, L. (2008), "The impact of call center employees' customer orientation behaviors on service quality", *Journal of Service Research*, Vol. 10 No. 3, pp. 239-55.

Reichheld, F.F. (2003), "The one number you need to grow", *Harvard Business Review*, Vol. 81 No. 12, pp. 46-54.

Santos, J. (2003), "E-service quality: a model of virtual service quality dimensions", *Managing Service Quality*, Vol. 13 No. 3, pp. 233-46.

Sharma, S., Niedrich, R.W. and Dobbins, G. (1999), "A framework for monitoring customer satisfaction: an empirical illustration", *Industrial Marketing Management*, Vol. 28 No. 3, pp. 231-43.

Shostack, L.G. (1977), "Breaking free from product marketing", *Journal of Marketing*, Vol. 41 No. 2, pp. 73-80.

Spreng, R.A. and Mackoy, R.D. (1996), "An empirical examination of a model of perceived service quality and satisfaction", *Journal of Retailing*, Vol. 72 No. 2, pp. 201-14.

Surjadjaja, H., Ghosh, S. and Antony, J. (2003), "Determining and assessing the determinants of e-service operations", *Managing Service Quality*, Vol. 13 No. 1, pp. 39-53.

Van Riel, A.C.R., Liljander, V. and Jurriens, P. (2001), "Exploring consumer evaluations of e-services: a portal site", *International Journal of Service Industry Management*, Vol. 12 No. 4, pp. 359-77.

Voss, G.B., Parasuraman, A. and Grewal, D. (1998), "The roles of price, performance, and expectations in determining satisfaction in service exchanges", *Journal of Marketing*, Vol. 62 No. 4, pp. 46-61.

Wang, Y.-S., Tang, T.-I. and Tang, J.-T.E. (2001), "An instrument for measuring customer satisfaction toward web sites that market digital products and services", *Journal of Electronic Commerce Research*, Vol. 2 No. 3, pp. 89-102.

Wolfinbarger, M.F. and Gilly, M.C. (2003), "e-TailQ: dimensionalizing, measuring and predicting e-tail quality", *Journal of Retailing*, Vol. 79 No. 3, pp. 183-98.

Woo, K.S. and Fock, H.K.Y. (1999), "Customer satisfaction in the Hong Kong mobile phone industry", *The Service Industries Journal*, Vol. 19 No. 3, pp. 162-74.

Yang, Z., Joon, M. and Peterson, R.T. (2004), "Measuring customer perceived online service quality: scale development and managerial implications", *International Journal of Operations & Production Management*, Vol. 24 No. 11, pp. 1149-74.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60 No. 2, pp. 31-46.

About the authors

Shirshendu Ganguli is an Assistant Professor in the Marketing Department at IBS Hyderabad, IFHE University. He was a Visiting Research Scholar from August 2008 to June 2009 at Bentley University, Boston, MA, USA. He has published in both international and national journals of repute, viz. *The Marketing Management Journal, Abhigyan, GITAM Journal of Management, Icfaian Journal of Management Research, Icfai Journal of Services Marketing* and *The IUP Journal of Marketing Management*. He has presented research papers at various national and international conferences. His teaching interests include Marketing Management, Customer Relationship Management, Services Marketing and Marketing Research. His research interests include Relationship Marketing, Customer Satisfaction and Customer Loyalty, and Service Quality. Shirshendu Ganguli is the corresponding author can be contacted at: ganguli_shirshendu@yahoo.com

Sanjit Kumar Roy is an Assistant Professor in the Marketing Department at IBS Hyderabad, IFHE University. He was a Visiting Research Scholar from August 2007 to June 2008 at Bentley University, Boston, MA, USA. He has published in both international and national journals of repute, viz. *International Journal of Bank Marketing, The Marketing Management Journal, Computers in Human Behavior, South Asian Journal of Management, Case Studies in Business, Industry and Government Statistics, IIMB Management Review, GITAM Journal of Management, Global Management Review, Icfaian Journal of Management Research*, and *Icfai Journal of Brand Management*. He has presented research papers at various national and international conferences. His teaching interests include Marketing Management, Customer Relationship Management, Services Marketing, Marketing Research and Brand Management. His research interests include Relationship Marketing, Customer Satisfaction and Customer Loyalty, Stakeholder Marketing, and Electronic Marketing.

VIEWPOINT

Banking without the banks

Steve Worthington
Monash University, Melbourne, Australia, and
Peter Welch
Bankecon, Marlow, UK

Abstract

Purpose – The financial crisis and the subsequent distrust of the existing banks have created an opportunity for new competitors to enter the market for financial services. Organisations from outside banking could use their trusted brands, their stronger grasp of information technology and their stronger customer service ethos to potentially shake-up the provision of financial services and hence to take business away from the "traditional" players. This paper aims to examine the potential for these "non-banks" to enter and expand into the UK financial services sector and to analyse their prospects, before finally reflecting on how big a challenge they face in entering this market.

Design/methodology/approach – The paper is based on a report entitled "Tesco Bank and Virgin money: prospects for banking without the banks" released in 2010, which offers an analysis of the UK market and of the main potential entrants. It presents a much abridged version of the report and has also been revised to provide a more international relevance.

Findings – The paper discusses the strengths and weaknesses of the two main potential entrants, Tesco Bank and Virgin Money, and draws conclusions based on some of the challenges that they will face in seeking to enter this market.

Originality/value – The paper is very relevant, given the publicly espoused aspirations of both Tesco Bank and Virgin Money to enter the market for financial services in the UK. It may also have lessons for other new entrants in other countries.

Keywords Financial services, Banks, Consumer behaviour

Paper type Viewpoint

Introduction

How significant are the effects of the financial crisis on the future structure of the banking sector?

Clearly, the crisis is leading to major changes in the capital, liquidity and accounting regimes for banks. But might the crisis also open up the sector to new competitors on a scale not seen before? Is the distrust of mainstream banks now so deep that ambitious companies in other sectors have an unparalleled opportunity to become major providers of banking services?

Opportunities for "non-banks" to enter the market have been discussed many times before. A 1994 study for the American Bankers' Roundtable concluded that "banking is

This paper is based on a report entitled "Tesco Bank and Virgin Money: prospects for banking without the banks", written by Peter Welch and Professor Steve Worthington (Welch and Worthington, 2010), available from: www.paymentscardsandmobile.com/banking/ It presents a much abridged version of the report and has also been revised to provide a more international relevance.

International Journal of Bank Marketing
Vol. 29 No. 2, 2011
pp. 190-201

0265-2323
DOI 10.1108/02652321111107657

essential to a modern economy; banks are not." Commentators have also forecasted that companies from outside banking would use their stronger grasp of information technology and customer service to shake-up financial services, taking lucrative business away from cautious and insular banks.

In many markets, retailers were seen as the biggest threat. Their strong brands, marketing know-how, existing store networks and store and loyalty cards offered a potential entry platform. Indeed, in the UK, leading retailers took up the challenge and have now been offering financial services for many years. Marks & Spencer (M&S), the leading clothing, food and household goods retailer, entered the market for financial services as far back as the late 1980s. Tesco and Sainsbury's, then the two largest UK supermarket chains, launched banking services in the mid-1990s.

Disruptive value brands such as Virgin and easygroup, that operate across structurally diverse consumer sectors (air travel, music retailing, mobile telephony, hotels) have also seen opportunities in financial services. Virgin Money launched in 1995 with an index tracking unit trust (mutual fund) and has since expanded its range of services. Easymoney, the financial services arm of the easygroup, now offers comparison sites for mortgages, bank accounts, credit cards and personal loans.

However, until the crisis, the "non-banks" concentrated on a select range of financial services and often operated through partnerships with existing banks. For example, the UK retailers concentrated principally on credit cards and other forms of consumer credit, simple savings accounts and insurance policies that could be sold directly. Tesco and Sainsbury's operated through joint ventures with RBS and HBOS respectively while M&S sold its financial services business to HSBC. Similarly, Virgin Money offers a select range of financial services across lending, savings and insurance. It sold its stake in the innovative "One Account" mortgage joint venture with RBS, though it remains an introducer for the business.

Nevertheless, the crisis may have extended the opportunities for "non-banks'. Tesco and Virgin Money in particular appear to be planning a move from niche players in financial services to full-service providers of retail banking. Each has signalled their intention to expand with current accounts and mortgages both being talked about. Tesco bought out RBS's stake in their financial services joint venture and re-named Tesco Personal Finance as Tesco Bank. Virgin Money has announced the purchase of a small regional UK bank to expedite its acquisition of a banking licence and provide a platform for launching a retail banking business.

Furthermore, both are ambitious in their visions for retail banking (see Table I). Virgin Money talks of an ambition "to offer a new kind of bank in the UK – one where everyone benefits", while Tesco says it will focus on "being simple, straightforward and rewarding loyalty".

In the wake of the financial crisis and given the stated ambitions of Virgin and Tesco in particular, this paper examines the potential for these "non-banks" to expand into UK retail banking. It begins by reviewing their development as players in the financial services sector, along with their expansion plans. Next it analyses their prospects by using a SWOT analysis, before finally offering some conclusions and sobering thoughts for these "new players".

Virgin Money	As you may have seen in the news recently, Virgin Money has been taking steps to become a fully licensed bank. This move is part of our ambition to offer a new kind of bank in the UK – one where everyone benefits. Where customers can be confident of getting a fair deal and great service. Where we can make a fair but not excessive profit. And where we try and do things in a way that's not just good for our business and our customers, but benefits others too. We are thinking about this as a bank that will make everyone better off. It will take some time before we're ready to launch the bank, but if you'd like us to keep in touch with you so you know when we do, please leave us your details below
Tesco Bank	Focus on being simple, straightforward and rewarding loyalty A full service financial services business "Every little helps" How we serve our customers will be our core strength

Notes: Virgin Money statement taken from a box on its website where people can register to be kept informed of its banking plans. Tesco Bank vision from presentation by Benny Higgins, CEO Tesco Bank, at Tesco's Retailing Services Seminar, 19-20 November 2009

Source: Virgin Money, Tesco Bank www.investorcentre.tescoplc.com/plc/ir/pres_results/presentations/p2009/ www.tescoplc.com/plc/ir/ar/archive/ https://uk.virginmoney.com/virgin/forms/bank-register-interest.jsp

Table I.
Virgin Money and Tesco Bank: banking visions

Virgin Money

Development to date

Virgin moved into financial services into the mid-1990s. Since then, it has essentially operated as a niche player in personal financial services, with many of the services actually supplied by third parties even if carrying the famous Virgin brand. Virgin Money was founded as Virgin Direct as far back as 1995, as a joint venture between a member of the Virgin group of companies and insurance group Norwich Union to offer equity savings products directly to the UK retail consumer market. It was one of the pioneers of index-tracking funds which carried low fees compared with actively managed funds.

In 1997, Virgin Direct Personal Financial Service Limited launched The Virgin One Account, a joint venture with RBS. The One Account was the UK's first current account mortgage direct to the retail market. However, in 2001, RBS bought out Virgin Direct Personal Financial Service Limited's stake in the joint venture and the management team transferred to RBS. Virgin Direct subsequently changed its name to Virgin Money and increased its product offering, adding a credit card offered in partnership with Bank of America (MBNA), additional savings and insurance products. In April 2004, Virgin Group Investments Limited acquired full ownership of Virgin Money and as at January 2010, Virgin Money had over 2.5 million customers with over £2 billion of funds under management and over 2.3 million Virgin Money cards in issue. In January 2010, Virgin Money announced a recommended offer for Church House Trust, a small regional bank offering deposits and mortgages.

Expansion plans

Virgin Money has made it clear that it intends to expand in retail banking, arguing that the financial crisis creates new opportunities. According to the Offer Document for Church House Trust:

> The financial crisis has tarnished the reputation of many UK banks, while market concentration in the sector has increased substantially. This has created the opportunity for a new entrant to provide a better, different form of banking to its customers, thereby increasing competition in the sector. Virgin Money identified this opportunity two years ago and therefore, together with certain partners, it prepared a recapitalisation proposal for Northern Rock plc, the UK mortgage bank which was ultimately nationalised in February 2008. Research conducted by Virgin Money over the past two years has shown consistently that there is a clear consumer demand for Virgin Money to enter the banking market. The research demonstrates that Virgin Money would be both a trusted deposit taker and mortgage lender.

The acquisition of Church House Trust, announced in January 2010, is explained as a step in this process:

> The acquisition of Church House Trust will provide the platform from which Virgin Money will develop a retail banking business in the UK, offering a full range of products to consumers under the "Virgin Money" brand.

Church House Trust, operating from Yeovil and Leeds in the UK, was formed in 1987. Since then, the bank has taken retail deposits and provided general banking services, as well as providing wealth management, pension and other financial services consulting functions. Despite its small scale and regional operation, Virgin Money describes Church House Trust as "an attractive vehicle for launching a retail banking business in the UK." Among the reasons it cites are:

- Church House Trust has all the necessary banking permissions and a good relationship with the Financial Services Authority (FSA), the UK financial regulator;
- Church House Trust has no reliance on wholesale markets for funding, no borrowing from other banks, retail deposits of more than double its loan book, a broad range of savings products and it focuses on detailed personal underwriting; and
- Church House Trust offers an IT infrastructure that can be strengthened and built on.

Virgin Money clearly envisages the possibility of further acquisitions, commenting in the Offer Document for Church House Trust:

> The government has said it hopes the disposal of bank assets will see new players enter the market and Virgin Money may consider opportunities should they present themselves.

In terms of product strategy, Virgin Money says it "aims to bring simplicity to the UK banking market which has traditionally been a complex sector." The focus will be on a strong retail deposit base, with Virgin Money saying its approach to banking is "founded on developing a sustainable, savings-based business."

Tesco Bank

Development to date

Despite the current level of interest in supermarket banking, it is important to note that Tesco like Virgin has been providing financial services for more than a decade. The supermarket group began offering financial services as far back as the mid-1990s. Tesco Personal Finance (TPF, now Tesco Bank) has focused principally on consumer credit (credit cards and unsecured loans), savings accounts and insurance. Overall, the bank now has six million customer accounts.

For most of its life, TPF was a 50/50 joint-venture with RBS. However, following Tesco's acquisition of RBS's stake in TPF in December 2008, TPF is now a wholly-owned subsidiary of the retailer. Tesco announced the renaming of Tesco Personal Finance as Tesco Bank at the time of its 2009/2010 interim results in October 2009. Tesco Personal Finance (now Tesco Bank, Tesco Bank is the trading name of Tesco Personal Finance plc) is now fully-owned by Tesco plc. It falls within Tesco's Retailing Services Division. Tesco Retailing Services also includes:

- the retailer's online shopping channels, tesco.com and Tesco Direct;
- Tesco Mobile, Tesco's telecoms joint venture with O2; and
- dunnhumby, its data analysis and consumer research business.

On a fully consolidated basis, TPF accounted for 50 per cent of retailing services' profit in 2008/2009. On becoming a subsidiary, TPF's results were consolidated into Tesco's UK business for the final ten weeks of the 2008/2009 financial year.

Expansion plans

Like Virgin Money, Tesco is now on record as stating its ambition is a move into full-service retail banking. The Chairman's Statement in Tesco's 2008/2009 Annual Report included the following:

> We have acquired the remaining 50 per cent of Tesco Personal Finance from Royal Bank of Scotland, a move which will enable us to develop an already very successful financial services offer towards our objective of becoming a full-service retail bank.

The commentary on Tesco Personal Finance in the 2008/2009 annual report states:

> The business is profitable and well-capitalised, which is a strong platform from which to pursue our plans to develop TPF from a successful, popular collection of financial products to a full-service retail bank in the years ahead. The new team, combining experienced management from Tesco and from the banking industry, is coming together well. Their focus for the time being is on migrating systems and customer support over to our own platforms, beginning the development of a branch network in Tesco stores and growing the business, both through existing and new products.

The renaming of Tesco Personal Finance as Tesco Bank reflects the strategy of developing the financial services business in to a full-service bank. In its 2009/2010 interim results statement of October 2009, Tesco commented:

> We are pleased to announce today the renaming of Tesco Personal Finance as Tesco Bank in recognition of our longer-term objective of creating a full-service retail bank for Tesco customers, offering a range of banking and insurance services through branches in stores and online.

Current accounts and mortgages are, at the very least, under serious consideration by Tesco. In investor presentations as part of its Retailing Services Seminar 2009 during November 2009, Tesco put forward both as potential new products for Tesco Bank. It listed other potential new products under the headings of:

- "savings and investments" (fixed rate bonds, individual savings accounts, investment funds); and
- "payment cards" (debit, prepaid).

However, the offer of a debit card implicitly presupposes a transactional account, if not a full-service current account. Clearly, the ambition is to be the personal customer's core provider of banking services. On current accounts, Tesco commented in one of the presentations: "We want to service our customers' main banking relationship", and "We want customers to say 'I bank with Tesco'."

Analysis

Bringing together the profiles of Virgin Money and Tesco Bank, how are we to assess their prospects? An obvious way of structuring the analysis of the non-banks' prospects is through a conventional SWOT framework. However, in terms of applying a SWOT framework to the non-banks' prospects, opportunities and threats lend themselves better to the characteristics of the retail banking market, and strengths and weaknesses to the non-banks themselves. The analysis therefore looks first at the opportunities and threats presented by the market to non-banks. It then considers the non-banks' strengths and weaknesses (see Table II).

Opportunities

Overall market size. Given their current scale relative to the market, the sheer size of the personal banking market clearly presents a major opportunity. Neither Virgin Money nor Tesco Bank has a presence in the mortgage and current account segments, and even in those major segments where the two non-banks do have a presence – namely retail deposits and consumer credit – it remains small relative to the market as a whole. Tesco Bank for example has a loan book of around 3.8 million pounds at August 2009, giving it a market share of less than 2 per cent of the market.

Strengths	Weaknesses	Opportunities	Threats
Strength of brands Product innovation Existing customer relationships and infrastructure	Small size Need for core skills Delivery channels	Overall market size Consumer anger at mainstream banks Disposals planned by UK Government as required under EC State Aid rules	Lower growth prospects for key personal banking segments Fall in structural profitability of banking (stronger capital and liquidity requirements) Competitive dynamics and customer behaviour

Source: Authors' analysis

Table II.
Tesco Bank and Virgin Money: SWOT analysis

However, the market's sheer size has been an opportunity for as long as Tesco and Virgin started to consider offering financial services. Both have offered a selected range of financial services (as direct providers, joint-venture partners, or introducers) for more than a decade. Indeed, if anything, given the likely new business trends in key business segments such as mortgages and consumer credit and the intense competition for retail deposits, the opportunity presented by the market's size alone has diminished.

Consumer anger at mainstream banks. The change that may justify a step change in the ambitions of Tesco Bank and Virgin Money is clearly the financial crisis. In the wake of the crisis, many assume that the level of consumer anger at, and distrust of mainstream banks significantly increases the opportunities for new entrants. Customers are more ready to consider alternative providers, including those from outside the banking sector. Above and beyond the market's size, it is this change that appears to underpin the ambitions of Tesco and Virgin to move from a selective offering of financial services to full-service retail banking.

Disposals under EC State Aid rules. A further major opportunity presented by the crisis is the possibility of acquiring an existing bank or branch network. Both Lloyds and RBS are required to make disposals as part of the conditions imposed by the European Commission under EC State Aid rules and the UK government intends to sell mortgage lender Northern Rock once conditions allow.

However, the disposals are likely to take some time given the complexities of, for example, separating the branches and customer accounts from Lloyds' and RBS's existing networks. Other banks, both existing players and potential new entrants to the UK market, are likely to be interested. Furthermore, the integration costs and risks for a Virgin or Tesco of a banking acquisition significantly larger than their existing banking businesses may be substantial.

Threats

If the financial crisis creates new opportunities, it also introduces new threats. While the crisis may open the banking sector to new competitors on a scale not seen before, in important respects it also makes retail banking less attractive.

Lower growth prospects for key market segments. First, key personal banking segments face lower growth prospects and/or intense competition, for example, both the mortgage and consumer credit segments are likely to grow much more slowly during the coming years than during the years before the crisis. With wholesale funding less available, competition for retail deposits will also be fierce. This will both put pressure on lenders' interest margins and may limit the ability of the non-banks to fund their growth in new market segments.

Structural profitability caused by stronger capital, liquidity and accounting requirements. Second, regulators are imposing tougher capital and liquidity requirements on banks as part of the reforms of the Basel capital adequacy framework. This is likely to reduce the structural profitability of banking, making it more capital intensive and requiring banks to hold more lower-yielding assets. More generally, regulators are likely to be wary of banks earning the returns on equity they enjoyed in the years before the crisis.

Competitive dynamics and consumer behaviour. In addition to the negative effects of the crisis, Tesco and Virgin also face the challenges of customer behaviour and pricing structures in retail banking. Thus despite all the moves to facilitate account switching, consumers remain instinctively relucant to change their current accounts. Further, banks remain reliant on opaque and unpopular means of generating revenue from their current accounts, namely high overdraft charges and little or no interest paid on credit balances ("dumb money" as one Australian banker was brave enough to label it – later revised as "interest insensitive deposits"). The failure of the OFT's court case against unauthorised overdraft charges (and consumer attachment to the misnomer of "free banking") is likely to weaken the pressure on banks to move to a more equitable pricing structure. This leaves Virgin and Tesco with the challenge of offering current accounts on a profitable basis without themselves relying on overdraft charges and negligible interest paid on credit balances as a means of generating revenue.

Strengths

Tesco and Virgin Brands. Clearly, a major strength of both Tesco and Virgin is the power of their consumer brands. Both are among the best known consumer names in the UK. While the underlying strategies are a little different between the two companies, the strength of their brands has already enabled Tesco to expand successfully into adjacent sectors and Virgin to establish itself across a range of different sectors. Tesco has diversified to varying degrees into petrol retailing, newspapers and magazines, health and beauty goods, kitchenware, household appliances, CDs, DVDs and even online music downloads. The underlying model here is the supermarket as a "one-stop shop". This model extends the parameters of lateral diversification from the retailing of goods to the retailing of services. It is noteworthy that Tesco's ambitions to expand its Services segment include Tesco Telecoms and Tesco.com/Tesco Direct as well as Tesco Bank.

The strategy of Virgin is to enter and expand in consumer markets where it sees high prices and consumer dissatisfaction, bringing a fresh, convention-challenging approach. The strength of its brand has allowed Virgin to operate across a range of structurally diverse consumer sectors, including air and rail travel, mobile telephony and the internet, health and financial services.

Product innovation. Both companies also bring to banking an innovative approach to products and services. This is already evident in their existing financial services businesses. For example, perhaps the nearest a retailer has come to literally retailing a financial service is Tesco's travel insurance. Clubcard holders can pick up a pack in-store and take it to the checkout with the rest of their shopping. As soon as the insurance pack is scanned along with the Clubcard, the customer is insured.

Virgin of course invented the One Account in partnership with RBS, combining a current account and mortgage in a single product. Customers pay their income and savings into the same account as their mortgage, so using their assets (on which they receive a lower interest rate) to reduce the balance on their mortgage (on which they pay a higher rate). Moreover the One Account also functions as a normal current account, which customer can use to make regular payments and cash withdrawals.

Virgin's original development with RBS over the One Account and Tesco's recently announced insurance partnership with Fortis highlight the scope for using partnerships with existing providers. The success of the supermarkets in own-brand foods offers an analogy, with scope for Virgin and Tesco to lead on marketing, branding and customer service.

Existing customer relationships and infrastructure. Both companies already have a substantial base of existing financial services customers to which they can offer new services. As at January 2010, Virgin Money had over 2.5 million customers. As at November 2009, Tesco reported six million customer accounts. Tesco has two additional resources at its disposal. First, it has the base of 16 million Clubcard holders. Second, Tesco has its nationwide retail network through which to promote and support the offer of financial services. Given these resources, Tesco may be in a stronger starting position than Virgin to expand its financial services business.

The retail network gives Tesco a potentially significant advantage in distribution. In comparison with new entrants having to use channels such as direct mail or advertising, the stores offer a readily available and low-cost marketing channel for the display of product leaflets and other literature. They also offer a means of servicing existing customers.

This points to the wider interactions between parent retailer and banking subsidiary. An important benefit is that the growth of the bank allows Tesco to internalise within the Group interchange payments that would otherwise flow externally. When Tesco Bank customers use Tesco ATMs, interchange is payable from the Bank to the retail parent. Plus when Tesco Bank credit cardholders use their cards in Tesco stores, interchange is payable from retail parent to Bank.

Tesco also presented data at its Retailing Services Seminar in November 2009 (from its in-house data specialist dunnhumby) showing that "retailing services" customers are its most valuable and most loyal. According to Tesco:

- customers who use two retailing services spend four times as much in store than those who don't use any services;
- customers with a Tesco credit card spend c.30 per cent more with Tesco than "lookalike" customers who don't have a Tesco credit card; and
- customers with two retailing services (based on customers who have services from both Tesco Bank and Tesco Direct) are 25 per cent less likely to "lapse" over a 12-month period than "lookalikes" without services.

The figures raise interesting causal questions about whether the most likely consumers of Tesco services are simply its most loyal shoppers, or whether consumers of services subsequently become more active users of Tesco as a retailer. But clearly, the figures indicate a strong relationship between customers of Tesco as a retailer and Tesco as a service provider.

Weaknesses

Small size. Both Virgin Money and Tesco Bank remain very small in the context of UK personal banking. This is despite the size of their parents, familiarity of their parent brands, and presence in financial services for more than a decade.

Even in its main lending segment, namely credit card and other consumer credit loans, Tesco Bank remains comparatively small. Its loan book of approximately £3.8 billion at August 2009 compares with total outstanding consumer credit of over £225 billion, giving it a share of less than 2 per cent of the market. The current small size of Tesco Bank and Virgin Money relative to the market underlines the challenge they face in becoming mainstream players in full-service retail banking. Something much more than a continuation of their current organic growth will be needed. Indeed a massive expansion of their financial services activities will be required.

In particular, with wholesale funding much less available following the crisis, Virgin and Tesco will need to increase the size of their deposit bases by an order of magnitude. One option available to achieve a step change in scale would be a major acquisition. However acquisitions, particularly when the acquired business is likely to be larger and more complex than the buyer's banking business, inevitably bring their own costs and risks.

Need for core skills. Having previously relied on partners, both Tesco Bank and Virgin Money now need to acquire and develop core banking skills in-house. Virgin Money in particular faces the challenge of becoming a provider of financial services rather than effectively an introducer, even if the services are branded in its name. And for Tesco, having relied on RBS's platforms and systems, it is taking banking in-house.

The skills and expertise required may be very different from their existing businesses. Core skills needed to succeed in financial services include risk, interest rate and liquidity management, and regulatory compliance, with their importance underlined by the financial crisis. Compare these with the core skills in retailing – sourcing products, buying well, merchandising and fulfilment of the purchase by the consumer. These skills may transfer readily to other retail sectors. For example, supermarkets may use their superior buying power to secure competitive advantage over specialists in health and beauty retailing, but they transfer less easily to financial services.

Both Virgin and Tesco of course recognise the need for banking expertise, but these skills will need to be applied in a commercial environment that is different – and that Tesco and Virgin want to differentiate – from a traditional retail bank. For example, while Tesco may want to combine the best of banking and retailing, financial services are not merchandised in the same way as tangible products sold in retail outlets. Only a limited number of financial services such as one-off travel insurance and foreign currency are purchased through a single transaction at a set price comparable to a retail transaction.

Core personal banking services such as current accounts and mortgages involve the provision of an account on a long-term basis for the customer. Customers have to go through an application process, with the possibility of rejection. Also the pricing is more complex, and often expressed as a percentage of the loan or deposit balance. The discounts, special offers and sales central to retailing work less well when applied to financial services. Indeed, whatever the aspirations of Tesco and Virgin to cut through the complexity of financial services, compliance requirements related to data protection, identity confirmation and money laundering often push in the other direction. And the crisis is likely to mean a tightening rather than a loosening of financial services regulation.

Delivery channels. A further challenge for both Tesco and Virgin is their lack of a branch network. Tesco, unlike Virgin, has its nationwide retail estate to exploit. While 65 per cent of Tesco Bank's business is currently done online, Tesco reported at its retailing services seminar in November 2009 that 70 per cent of customers would welcome an opportunity of transaction banking in store. Greater use of the retail network clearly forms part of its expansion plans in financial services.

However, despite their physical proximity, bank branches are very different from retail stores. Shops are essentially outlets for the sale of goods. Customers come to browse and/or purchase specific items. Bank branches are sometimes described as a distribution channel, but this is in many ways a misleading description. Banks are not in the distribution business (other than perhaps for cash itself). They are principally places for the management of bank accounts. Customers may visit a branch to enquire about/apply for a banking service, nevertheless most branch visits are for carrying out transactions on existing accounts (mainly current and deposit accounts), such as paying-in cheques, paying-in or withdrawing cash, and arranging more complex transactions that cannot be arranged remotely.

Tesco can of course locate branches within its stores as well as make greater use of its checkouts for banking transactions, however, despite its nationwide retail network, how many of the stores are suitable for branch banking? Tesco has 450 superstores in the UK (November 2009). This is substantial, but compares with UK branch networks of more than 1,300 for Santander and HSBC and approximately 1,700 for Barclays.

Furthermore, the installation of branches in stores will be costly for a business that has essentially used a direct model to date. It will need to justify itself in terms of its occupancy of what is otherwise valuable selling space for the core business.

Conclusions

Before the financial crisis, both Virgin and Tesco had provided financial services for more than a decade. However, both were happy to operate as niche providers. They concentrated on a select range of products, operating through partnerships with existing banks and insurance companies. Neither showed an appetite for directly competing as full-service providers in retail banking and perhaps they were wise to do so.

In the wake of the financial crisis, both now harbour ambitions to become full-service retail banks. But are the changes flowing from the financial crisis sufficient to justify such an expansion? Existing banks may be more unpopular, making non-banks more attractive. Nevertheless there is a debit as well as credit side to the post-crisis investment case. Banking is set to be less profitable, making the market less attractive. The biggest challenge for Tesco Bank and Virgin Money as full-service retail banks may be to grow quickly and profitably while at the same time doing banking in a way that is markedly different from the mainstream. Tesco admits that one of the challenges it faces is the industry’s “standard economic model”. The hurdles to overcome on both current accounts and mortgages are high.

The pricing of retail banking products in the UK has in some ways been analagous to the famous description of the art of taxation of Jean Baptiste Colbert, French economist and Minister of Finance under King Louis XIV of France:

> The art of taxation consists in so plucking the goose as to obtain the largest possible amount of feathers with the smallest possible amount of hissing.

Existing pricing structures are reinforced by the attachment of UK consumers to “free” current account banking, “free” credit cards and “free” ATM withdrawals. In practice, these attachments to notionally “free” banking services acts as a significant barrier to innovation and competition in pricing, and has resulted in significant cross-subsidies between different groups of banking customers.

Virgin and Tesco therefore face the challenge of offering current accounts profitably without themselves relying on the same revenue models as existing providers. They also face the challenge of acquiring deposits without either offering unprofitable rates or tempting introductory rates and then reducing them over time. Also in light of their stated "visions" for banking, high standards will be expected. Their services will be closely scrutinised by consumer and personal finance journalists, and ranked in the many comparison sites on the internet. Reputationally, Virgin and Tesco are likely to face tougher standards than existing banks.

From the perspective of competition and consumer choice, the banking ambitions of Virgin and Tesco are clearly welcome. Indeed for all those who follow developments in banking, it will be fascinating to watch. This is an attempt to do banking without the banks on a scale not seen before. Virgin has already signalled that it is prepared to challenge the "free-in-credit" model that dominates personal banking in the UK. But even brands as strong as Tesco and Virgin will find it tough to shake-up a market with habits and structures as entrenched as UK personal banking.

Reference

Welch, P. and Worthington, S. (2010), "Tesco Bank and Virgin Money: prospects for banking without the banks", available at: www.paymentscardsandmobile.com/banking/

About the authors

Steve Worthington is Professor of Marketing in the Faculty of Business and Economics at Monash University, Melbourne, Australia. He previously worked in the UK as Marketing Group Head within the Co-op Brand, the own label of the Co-operative Wholesale Society (CWS), and prior to this as Head of Marketing and Planning with the Co-operative Bank, a subsidiary of CWS. He has published widely in both academic journals and practitioner-focused publications. His interests focus on the distribution of financial services and developments in the uses of plastic cards and payment systems for financial services. Steve Worthington is the corresponding author and can be contacted at: steve.worthington@buseco.monash.edu.au

Peter Welch is an independent consultant specialising in the banking and healthcare sectors. Within banking his main areas of work are market and competitor analyses, with a focus on personal banking, cards and payments. He also undertakes research into bank reporting and performance, and has published several journal articles with Professor Paul Klumpes of EDHEC Business School. He maintains a website (www.bankecon.com) with details of his consultancy and research.

Call for papers

International Journal of Bank Marketing

Special issue on

Relationship marketing strategies of Indian banks in the wake of the global economic slowdown

Guest Editor: Sanjit Kumar Roy, IBS Hyderabad, IFHE University, India

The banking industry plays an important role in the economic development of a country by acting as a hub and barometer of the financial system. Liberalization of the Indian financial services sector in the early 1990s paved the way for an influx of many private and foreign banks which have altered the structure of the market and also changed customer expectations. In the wake of the changing dynamics in the financial services sector, banks in the region have the uphill task of retaining their existing customers, acquiring new customers, building customer confidence and maintaining a robust financial performance. For these challenges, the Indian banks need to adopt and implement innovative relationship marketing strategies to maintain the competitive edge in the marketplace.

The *International Journal of Bank Marketin*g welcomes submissions offering theoretical and empirical insights into relationship marketing strategies adopted and implemented by the Indian banks during and after the recession. Empirically robust original papers, employing rigorous methodological tools, are invited. Contributions targeted towards this special issue include, but are not limited to, the following topics:

- Relationship marketing orientation of Indian banks
- Relationship benefits offered by the banks and their impact on customer satisfaction and customer confidence
- Factors affecting the effectiveness of relationship marketing strategies of Indian banks
- Relationship value, relationship equity, relationship quality and customer loyalty
- Impact of relationship marketing strategies on customers' trust, commitment, corporate brand image and word-of-mouth behaviors
- Impact of relationship marketing strategies on the financial performance of banks
- Importance of customer education in the Indian banking sector
- Customers' motivations for maintaining relationships with the banks.

Manuscripts of approximately 5,000 words should follow the journal's manuscript guidelines (**www.emeraldinsight.com/ijbm.htm**) and be submitted using Scholar One's Manuscript Central online submission system. This is accessible at: **http://mc.manuscriptcentral.com/ijbm** Manuscripts must be original work (theoretical, empirical or case study) and not under consideration by any other journal or publication outlet.

Deadline for submission: 2**0 August 2011**

Preliminary enquiries may be made to:

Sanjit Kumar Roy, Assistant Professor,
Department of Marketing & Strategy, IBS Hyderabad, IFHE University, India, AP, 501 504, India
E-mail: **sanjit@ibsindia.org** or **roysanjit2004@yahoo.co.in**
Tel: **+91 8417 236660 to 65**
Fax: **+91 8417 236653**
Mobile: **+91 90003 33316**

Call for papers

International Journal of Bank Marketing

Vol. 30 No. 2

Special issue on

Social issues in banking

Guest Editor: Sharyn Rundle-Thiele, Griffith Business School, Griffith University
Co-Editor: Cheryl Leo, Griffith Business School, Griffith University

Some definitions of social responsibility (e.g. Carroll, 1991, 1999) consider Friedman's (1962) economic requirement as a foundation, suggesting that legal, ethical and philanthropic considerations should be catered for, once the economic responsibility of a firm is fulfilled. These views have been challenged. More liberal stances suggest that the true purpose of corporations is to make societies better off, and to create societal wealth (Cohan, 2002). This liberal stance is in stark contrast with Friedman's (1962) view suggesting that there is little benefit in making a profit if it is not sustainable. The recent US credit crunch provides a case in point of the need for sustainability in the banking and financial sector. The US government resumed control of the two largest lenders in the USA (Freddie Mac and Fannie Mae), when 100,000s of US families faced loan foreclosures and the banks threatened to collapse. The USA was not the only country faced with the need for government to rescue banks. Business practices involving extending unsustainable levels of credit created chaos with significant societal and economic implications across the globe.

The goal of this special issue is to bring together research that is theoretically innovative and well grounded to provide deeper insights into how the sector has evolved and will continue to evolve. In line with the nature of the journal, the articles will provide insight for academics and practitioners alike, so that understanding can be enriched. Contributions that would be welcome for this special issue include, but are not limited to:

- Sustainable banking practice
- Sustainable consumption
- Environmental regulation
- Social responsibility and banking
- Ethical banking practice
- Social banking practice
- Cross-cultural aspects of sustainability in banking
- The role of credit in over-consumption and materialism.

References

Carroll, A.B. (1991), ''The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders'', *Business Horizons*, Vol. 34, pp. 39-49.

Cohen, J. (2002), '''I didn't know' and 'I was only doing my job': has corporate governance careered out of control? A case study of Enron's information myopia'', *Journal of Business Ethics*, Vol. 40, pp. 275-99.

Friedman, M. (1962), *Capitalism and Freedom*, University of Chicago Press, Chicago, IL.

Deadline for submission: **30 November 2011**

The special issue is scheduled to be published: **mid-2012**

Manuscripts following the journal's manuscript guidelines (**www.emeraldinsight.com/ijbm.htm**), should be submitted using Scholar One's Manuscript Central online submission system.

This is accessible at: **http://mc.manuscriptcentral.com/ijbm**
Manuscripts must be original work (theoretical, empirical or case study) and not under consideration by any other journal or publication outlet.

The initial submission will be reviewed by the Guest Editor and, if deemed suitable, then placed for double-blind review with experts in the field.

International Journal of

Bank Marketing

For the financial services sector

ISSN 0265-2323

Volume 29
Number 3
2011

Editor
Jillian Farquhar

CONTENTS

Received March 2010
Revised March 2010
Accepted September 2010

On the role of SMS for transaction confirmation with IVR telephone banking

G. Peevers, G. Douglas, D. Marshall and M.A. Jack
Centre for Communication Interface Research, School of Engineering and Electronics, The University of Edinburgh, Edinburgh, UK

Abstract

Purpose – The purpose of this paper is to deliver empirical results on the effects of (out-of-band) short message service (SMS) confirmation messages after transactions have been completed in an automated interactive voice response (IVR) telephone banking service. The research seeks to discover if SMS confirmations have a positive effect on customer relationship to furnish evidence for a proposed business case for a multi-channel banking service. The paper aims to offer results on customer attitude on the role of SMS with IVR as a multi-channel customer relationship management (CRM) strategy in digital banking.

Design/methodology/approach – The methodology is an empirical study based on a controlled laboratory experiment using bank customers as participants. Questionnaires and user observation techniques were employed to collect quantitative and qualitative data, which were analysed using repeated measures ANOVAs.

Findings – Transaction confirmation is shown to be important to customers – whether by an SMS message or within the IVR telephone call itself. Customers judged the role of SMS for CRM as highly desirable after monetary transactions; they prefer the version of the IVR banking service that provides (out-of-band) SMS confirmation compared to one that does not – and they judged it significantly higher for quality. However, there were no significant differences detected between customer attitude scores for usability of IVR calls involving funds transfers with, or without, an SMS confirmation. As a consequence, the business case was only developed as far as inclusion of transaction confirmation within the IVR call itself, and not extended to use of SMS.

Practical implications – Implications from the results are offered as management insights for the financial services sector in seeking integrated mobile CRM strategies, or "next call avoidance" strategies.

Originality/value – The paper reports findings from a controlled experiment with 116 participants that was based on extension of an existing IVR telephone banking service with which they were all familiar as users.

Keywords Telephone banking, Service industries, Automation, Interactive devices, Mobile communications systems

Paper type Research paper

1. Introduction

The continuing widespread advances in computer technologies have encouraged many banks to adopt new methods of interacting with customers to improve customer service, to lower costs and to maintain competitive advantage; and from a customer point-of-view, to offer more convenient methods of banking. Banks are now committed to making available customer services that have traditionally involved interacting

International Journal of Bank Marketing
Vol. 29 No. 3, 2011
pp. 206-223

0265-2323
DOI 10.1108/02652321111117494

with branch staff, using different digital channels such as interactive voice response (IVR) telephone banking or internet banking, encouraging customers to contact them using such digital (direct) channels, rather than by person-to-person contact. Banks also seek to identify strategies for 'next call avoidance' that might eliminate situations where the customer telephones the bank purely to seek reassurance in confirming that a recent transaction has indeed been processed. One such potential new technology is mobile phone banking (m-banking) and this paper offers results from a controlled experiment, involving integrating short message service (SMS) features with an existing IVR telephone banking service as a new way of delivering (secure, out-of-band) transaction confirmation messages. The aims of the experiment were to investigate the impact on customer attitudes and the impact on customer relationship of introducing SMS confirmations after IVR telephone banking transactions in order to build a business case for deployment; and to gather data on the acceptability of integrating an SMS channel with an existing IVR digital banking channel.

1.1. Mobile banking

Mobile banking services allow customers to carry out banking transactions such as balance enquiries, ordering cheque books, and completing funds transfers, using a mobile device. Mobile banking, m-banking, is a general term that can be applied to a number of methods for enabling customers to use their mobile device to perform banking actions. These include accessing the internet directly using a micro-browser on a mobile phone, as well as SMS banking with downloadable applications and software clients. The mobile phone offers banks enormous potential as a service channel because of their ubiquity, and m-banking can help banks to retain existing technology-savvy customers by providing value-added, innovative services whilst at the same time attracting new customers (Tiwari *et al.*, 2007).

SMS, or text messaging, as it is commonly known, is still a significant growth area in mobile communications. It is estimated (Martin, 2010) that worldwide 4.1 trillion (UK trillion) text messages were sent in 2008. The Mobile Data Association (MDA) reports that in 2008 a total of 78.9 billion text messages were sent in the UK alone (MDA, 2009), 216 million per day, and this was up 22 billion on the annual total in 2007. Research has found that text messaging is most commonly used as an effective one-to-one method of communication between friends (Sillence and Baber, 2004). Businesses have also realised that there is huge potential in SMS for carrying out business activities, and for individual communication with customers. It was estimated, by market research group Radicati, that in 2004, 55 per cent of text messaging was for business use, with much further growth to come (Faulkner and Culwin, 2005). SMS banking services have already been successfully implemented by banks in Asia, the Middle East and South Africa, with both push (automatic) and pull (customer initiated) services offered to customers (Rumpa, 2005). There has however, only been limited research on customer impact of SMS banking (Peevers *et al.*, 2008), one of the drivers for the experiment reported here.

The advantages of mobile banking are its convenience, offering access to banking, no matter what the location or time; and its efficiency (Laukkanen, 2007; Jarvenpaa *et al.*, 2003; Suoranta, 2003; Tiwari and Buse, 2007; Kanniaien, 2010). In spite of these advantages, some authors (Lee and Chung, 2009; Pousttchi and Schurig, 2004) have remarked on the slow development of the market for mobile banking. In countries such as Korea, Finland, and Taiwan studies have shown the usage levels of mobile banking are lower than predicted (Laukkanen, 2007; Lee and Chung, 2009; Luarn and Lin, 2005). What are the factors preventing large-scale adoption of mobile banking? Research has shown that customers worry about how much it will cost (Luarn and Lin, 2005); and worry about the security of the service (Brown *et al.*, 2003; Luarn and Lin, 2005), although some observers (Laukkanen, 2007; Laukkanen and Lauronen, 2005; Suoranta, 2003) have argued that security concerns are not a prohibitive issue. Customer communication has also been recognised as a key factor in adoption of m-banking (Laukkanen and Kiviniemi, 2010). The perceived complexity of mobile banking is also argued to be a cause of low usage levels (Lee at al., 2003) and it has been argued (Lee and Chung, 2009) that trust is one of the most important factors in the low adoption of mobile banking, and is the factor that most impacts on customer satisfaction with this banking channel. Trust has an impact on level of adoption in all forms of digital banking (Aladwani, 2001), and has been researched extensively (Grabner-Krauter and Kaluscha, 2003; Kim and Prabhakar, 2000; Kim and Moon, 1998; Suh and Han, 2002, Koenig-Lewis *et al.*, 2010). The research reported here sought to explore if the use of (simple) SMS messages from the bank on their mobile phone might serve to reduce the impact of these limiting factors for m-banking services in general.

It has also been found that older user have usability problems with texting on mobile phones (Kurniawan, 2008; Ornella and Stephanie, 2006; Peevers *et al.*, 2008). Older users have been found to be passive users of mobile phones, and can find the process of text messaging intimidating (Kurniawan, 2008). By the same token, it has also been found that ease of use has a stronger influence on female users than on male users (Riquelme and Rios, 2010). As a consequence, the research reported here was carefully planned to include a balance of male and female participants and equal numbers of older and younger users.

1.2. Context for the research

The existence of a relationship between service quality and satisfaction is well accepted in the banking sector (Ennew and Binks, 1999; Jamel and Naser, 2002; Hooi Ting, 2004). The aim of this research was to derive objective, empirical results on the impact on the customer experience of introducing SMS confirmations on funds transfers in an IVR telephone banking service. If a bank can successfully furnish SMS messages to confirm transactions carried out using other digital channels, and thereby remove the propensity for customers to speak to an advisor ("next call avoidance") in order to enquire/double-check transaction details, this could result in cost reductions for the bank and a better user experience for the customer with additional convenience, reassurance and confidence.

1.2.1. Customer relationship management (CRM). SMS banking, used as a one-to-one business-to-customer communication channel, offers potential for improved customer relationship management (CRM) since SMS can also be used for marketing of a bank's services and products, confirmation of transactions made by customer with the bank via another channel (e.g. internet, telephone banking), and confirmation of contact with the bank via another channel, confirmation of appointments, complaints (actually an important issue for businesses (Fornell and Wernerfelt, 1987; Johnston and Mehra, 2002) and for preventing customer switching behaviour). An agreement on a conceptualisation of CRM is still lacking (Liljander *et al.*, 2007), but a bank's CRM strategy can employ many channels, such as direct mail, telephone, loyalty cards and e-mails. Businesses use CRM as way to build a competitive advantage to distinguish their brand from competitors and to foster stronger loyalty from their customers (Crosby and Johnson, 2001).

SMS can be used within such a CRM strategy. Mobile CRM has been defined as:

> Customer relationship management of any kind including interactive communication between an organisation and a customer using a mobile device (Liljander *et al.*, 2007).

There has, to date, been limited research into mobile banking services for CRM and the effects they will have on customers (Crosby and Johnson, 2001; Lin and Wang, 2006; Mort and Drennan, 2005; Okazaki, 2005). One study (Richardson, 2005) on customer complaint management compared multi-channel electronic banking options such as ATM, SMS banking, e-mail and a message function on internet banking. In that study, the majority of customers (72 per cent) considered SMS banking to be an appropriate channel for updating them on their complaint. Another study (Liljander *et al.*, 2007), examined mobile CRM used by an airline and concluded that customers are not ready for this type of mobile application, although they did find that participants who already used the mobile internet had a more positive attitude to mobile CRM. With such little research so far there is a need to gain further insights on CRM via mobile phones.

The term CRM is frequently used interchangeably with relationship marketing (RM) (Liljander *et al.*, 2007), defining strategies used by businesses to build and develop long term relationships with customers that are beneficial to both. In retail banking CRM has been defined as:

> The activities carried out by banks in order to attract, interact with, and retain more profitable or high new-worth customers (Walsh *et al.*, 2004).

In this respect, it is often the most profitable customers that are the prime target for CRM strategies. The aims of CRM are to increase customer profitability while also providing better services for customers (Leverin and Liljander, 2006), but a CRM strategy will not always lead to a stronger relationship between a business and its customers. Research by Leverin and Liljander (2006) investigated the impact of a case bank's CRM strategy to examine if it strengthened customer relationship satisfaction and loyalty. They did not find confirmation of the positive effects of the CRM strategy, but they found that customers did perceive improvements in the banking relationship after the CRM strategy was launched. Mobile technologies and SMS in particular can perform a role in CRM for facilitating relationships, though it has been suggested (O'Loughlin *et al.*, 2004) that the increase in self-service and automated services in banking are actually further weakening these relationships.

Storbacka (1997) has suggested applying the principles of market segmentation (Smith, 1956) in a CRM context, with segmentation proposed on the basis of relationship revenue, cost, volume and profitability (Leverin and Liljander, 2006; Storbacka, 1997). The customer segment most valuable to banks is composed of their high volume, profitable customers. Anderson and Mittal (2000) note that customer relationship profitability arises through the acquisition and retention of "high quality" customers with low maintenance costs and high revenue. Customer switching behaviour in this group should be kept to an absolute minimum (Storbacka, 1997) to maintain and hopefully increase profits. Leverin and Liljander's (2006) RM survey study was conducted on two profitability segments: the most profitable and those of mid-level profitability. They did not find any differences between the two segments on customers' evaluations of the service relationship or their loyalty towards the bank.

In what ways could m-banking benefit a bank's CRM strategy? The least valuable customer segment to a bank is composed of their low volume, unprofitable customers. The recommendations (Zeithaml *et al.*, 2001; Storbacka, 1997) for this segment are to increase the volume of this group, or find ways to alter the methods of transacting with these customers to increase relationship revenue and cut relationship costs. It is common for banks to direct the least profitable customers to self-service options to reduce relationship costs (Leverin and Liljander, 2006). Mobile banking could be of benefit in achieving an impact on the nature of transactions, and for this study the proposed SMS transaction confirmation could reduce relationship costs for a bank as a strategy for "next call avoidance". This benefit should also apply with the mid-level profitability customers, which could form the majority of the bank's customers. It could also be suggested that m-banking will appeal to a bank's businesses customers, who are likely to belong to the most valuable customer segment, as an innovative time saving service. For banks, mobile CRM is a way of developing mutually beneficial and long term relationships with this profitable group of customers. The use of Mobile CRM should also lead to an increase in customer loyalty (Fjermestad and Romano, 2003), and it may also have positive effects on the bank's brand image (Helenius and Liljander, 2005; Lam and Chan, 2003; Nysveen *et al.*, 2005). Crosby and Johnson (2001) propose that a CRM strategy must lead to a more distinct brand. Implementing innovative mobile CRM services may help a bank stand out from its competitors.

1.3 Hypotheses for this research

The experiment was based around a practical investigated of whether an SMS confirmation message received after completing a funds transfer using IVR telephone banking would improve the customer satisfaction with the IVR digital banking channel. Three (null) hypotheses were postulated for the research:

H0-1. There will be no differences in customer satisfaction scores for the different versions of telephone banking.

H0-2. There will be no differences in customer preferences for the different versions of telephone banking.

H0-3. There will be no differences between the participant age groups.

2. Method

2.1 Experiment design, independent variables

The experiment involved customers using a fully-realistic copy of the case bank's automated IVR telephone banking service[1] with which they were all familiar as users. The IVR service was extended for the experiment with the new SMS confirmation capability, and participants received messages on a Sony Ericsson K800i handset with a "standard" keypad. The independent variable for the experiment was the version of the IVR telephone banking experienced. The experiment involved:

(1) calls to the current version of IVR for which there was no confirmation after funds transfer;

(2) calls to a version of the IVR with confirmation of the updated balance within the IVR call flow itself;
(3) calls to a version of the IVR with subsequent confirmation by SMS message.

There was also a between-participants variable controlled for in the experiment, whereby, for half of the participants in condition (3) (with an SMS confirmation message), the IVR design was as condition (1), without confirmation of the updated balance in the IVR flow; whilst for the other half of the participants the IVR design was as condition (2) with confirmation within the IVR flow such that this group had two separate confirmations, IVR then SMS. Participants experienced all of their conditions in a balanced, repeated-measures design. There were two other (participant) variables included in the design – gender and age group (45 years and under versus 46 years and over). The experiment was designed to balance for the order of experience of the independent variable (sequencing of conditions) across the participant cohort by age group and by gender.

2.2 Dependent variables
Customer attitude to the different channel experiences was measured using a questionnaire, and customer preference using a quality metric with preference scores.

2.3 Usability questionnaire
The design of the attitude questionnaire used for this experiment followed best practice (Likert, 1932) by using an equal number of negative and positive statements presented in a randomised order for each participant (on a laptop computer). The use of questionnaires to evaluate services and user interfaces has a long history (LaLomia and Sidowski, 1990; Root and Draper, 1983). The attitude questionnaire has been well-proven in previous usability research (Peevers and McInnes, 2009; Peevers *et al.*, 2009; Weir *et al.*, 2009a; b; 2008, 2007, 2006). The questionnaire used a seven-point Likert format that ranged from "strongly agree" (1) to "strongly disagree" (7). Following reversal of the polarity of negative questionnaire statements, a score of 7 consistently indicates a strongly positive attitude and 1 a strongly negative attitude. The attitude questionnaire consisted of 22 statements that address a range of cognitive and affective attributes relating to usability of the customer experience: complicated, knowing what to do, efficient, happy to use again, confused, friendly, stressed, polite, enjoyable, frustrating, flustered, easy to use, concentration, in control, need improvement, secure, reliable, rushed, liked voice, prefer to speak to human being, voice clarity and confident transaction was completed:

Q1 I thought the service was too complicated.

Q2 When I was using the service I always knew what I was expected to do.

Q3 I thought the service was efficient.

Q4 I liked the voice.

Q5 I would be happy to use the service again.

Q6 I found the service confusing to use.

Q7 The service was friendly.

Q8 I felt under stress when using the service.

Q10 I thought the service was polite.

Q11 I found the service frustrating to use.

Q12 I enjoyed using the service.

Q13 I felt flustered when using the service.

Q14 I think the service needs a lot of improvement.

Q16 I would prefer to talk to a human being.

Q17 I thought the voice was very clear.

Q18 I felt that the service was reliable.

Q19 I had to concentrate hard to use the service.

Q20 I did not feel in control when using the service.

Q21 I felt confident in the security of this service.

Q22 I felt confident my transaction was completed successfully using this service.

All participants completed the questionnaire following exposure to each of their three experiment conditions. An overall attitude score was determined from the overall mean for all of the attributes by all participants. Individual attributes were also analysed separately to analyse any specific issues that arose.

2.4 Quality metric and post experiment questionnaire

At the end of their experiment session, participants were asked which experience they preferred, and by rating their three experiences on a 0-30 linear scale they provided an overall rating as well as a rank order of preference. This type of quality metric has been successfully used in previous research (Peevers *et al.*, 2008; Weir *et al.*, 2009a, b). Participants also completed a structured exit interview to discuss their reactions to the different experiences and their likes and dislikes.

2.5 Experiment participants

The number of participants required depends upon the amount of segmentation reflected in the overall user population, for robust statistical testing, larger numbers are needed in each key demographic group, e.g. differing age groups and genders (Landauer, 1988), to lessen the impact of individual differences. Two age groups were judged ample for this work: the median age of the bank's IVR customer user group is 45. To randomise the set of six treatment orders combined with the between-subjects setting in condition (3) as described above, plus a balance for participant age group and gender, a full-factorial experiment design requires a minimum of $n =$ six orders $\times$ two IVR types in condition (3) $\times$ two age groups $\times$ two genders $= 48$ participants. A target of 96 participants was defined, to achieve an over-sampling of 2:1 in each combination. A cohort of 116 participants actually took part in the experiment. The case bank contacted a sample of 1,000 of its customers and invited them to take part in the research. They were all known to be users of the bank's IVR service; and were all confirmed to be mobile phone owners, Some 20 per cent of the invited customers volunteered to take part and from this list the required age and gender quotas were recruited to attend for their individual one-hour experiment session. Participants were presented with an honorarium of £30.

The final cohort of participants showed near balance for gender (54 per cent female) and near balance for age group (47 per cent), Table I. The age range of the participants was 20 to 76 and the mean age was 46. A total of 110 participants provided complete data sets for the analysis.

Asked in the exit interview (as an open question), some 29 per cent of participants reported that they were unaware that their bank offered m-banking facilities. Of the others, 11 per cent were receiving SMS text alerts such as weekly balances and 2 per cent when their bank cards were used abroad. A range of reasons were offered for non-use of m-banking, Table II.

A total of 82 per cent of the cohort reported that they had sent a text message before. Those who had used text messaging were asked about their frequency of use, Table III. Some 52 per cent of these text users reported that they used predictive text (T9 or iTap); 42 per cent did not; and 6 per cent sometimes made use of predictive text when writing SMS messages.

	Age 18-45		Age 46 and over		Total	
	n	%	*n*	%	*n*	%
Males	26	22.4	27	23.3	53	45.7
Females	29	25.0	34	29.3	63	54.3
Total	55	47.4	61	52.6	116	100

Table I. Participant demographics

Reasons	*n*	%
Not aware m-banking was available	24	29
No need for m-banking	8	10
Use internet banking in preference	22	27
Use phone/ATM/ branch in preference	7	9
Security concerns with mobile phones	4	5
Don't use mobile phone	4	5
Other issues	13	16

Table II. Reasons for not using mobile phone banking services

	Number		Age 18-45		Age 46 and over	
Frequency	*n*	%	*n*	%	*n*	%
A few times a day or more	42	44	28	56	14	31.1
Daily	22	23	14	28	8	17.8
A few times a week	20	21	7	14	13	28.9
Weekly	5	5	0	0	5	11.1
Monthly	0	0	0	0	0	0
Less often	6	6	1	2	5	11.1

Table III. Participants' SMS usage frequencies

2.6 Versions of the IVR telephone banking service

The IVR services experienced in the experiment were faithful replicas of the commercial IVR telephone banking service used by these customers of the case bank. This requires users to go through a security procedure whereby they enter their account details and two random digits from a secret security number (personas with fictitious customer account details for dummy accounts were provided for use in the experiment) before encountering a menu of options.

In the experiment, for calls to the existing IVR telephone banking dialogue (condition (1) above) transactions are confirmed with the spoken message "Thanks, your money has been transferred". For calls to condition (2) above, the existing IVR service was extended with the new confirmation messages after a transaction "The balance of your current account is now < amount here > ". For calls to condition (3), which involved an SMS message, both of these dialogue approaches were used (balanced between-subjects) – "We will send you a confirmation of this transaction by text message"(the version without mention of the updated balance in the IVR as per condition (1)): and "The balance of your current account is now < amount here > and we will send you a confirmation of this transaction by text message" (the version speaking out the updated balance in the IVR as per condition (2)).

An example SMS funds transfer confirmation is shown in Figure 1.

2.7 Scenarios

Participants were asked to undertake a set of scenarios such as "You want to transfer some money from your current account to your friend's account. Call the bank and use the automated service to transfer £300 to their account". Participants were given all of the account details and information they would need to complete the tasks.

3. Results

3.1 Customer attitudes scores

The mean overall attitude scores, computed over the 22 statements in the attitude questionnaire, for each of the four versions are shown in Table IV.

Figure 1.
Example of SMS transaction confirmation message

The current IVR version with separate SMS confirmation scored the highest mean attitude score. A repeated measures analysis of variance (ANOVA) was performed on the mean scores using age group, gender and IVR type (IVR with or without balance update) as between-participants factors. There was no significant main effect of version ($\mathrm{df} = 1.96, F = 0.746, p = 0.475$) or any significant interactions due to the main between-participant variables, gender, age group. This is an interesting finding given that twice as many participants in the younger age group used SMS messaging on a daily basis than did participants in the older age group.

Comparing scores for the IVR version with SMS confirmation to the current version of the IVR service without SMS shows three usability attributes to be statistically significantly higher ($p < 0.05$) with addition of SMS confirmation, "confident transaction was completed, voice clarity and efficiency". Comparing scores for the IVR version with both updated balance message and SMS confirmation message to the current IVR version alone, showed that the version with confirmations scored significantly higher for the attribute friendly ($p = 0.022$). Comparing scores for the IVR version with updated balance prompt to the current IVR version alone found only one attribute to be significantly higher for the version with updated balance, easy to use ($p = 0.033$).

3.2 Quality and preference

Participants were asked to rate the quality of the four versions of the service on a 0-30 point rating scale between "worst" and "best". Table V shows the mean and standard deviation of the quality ratings for each version of the service.

There were no significant differences between the versions that involved SMS messages (univariate ANOVA) and there were no age or gender effects. The IVR with SMS confirmation message version scored significantly higher than the current IVR version, $p = 0.014$ (paired samples t-test). There was no statistically significant difference between the IVR with updated balance version and either of the versions that included SMS confirmations (paired samples t-test). The IVR with updated balance version scored significantly higher than the current IVR version alone,

Version	Mean	SD
Current IVR ($n = 110$)	5.35	0.43
Current IVR + balance update ($n = 110$)	5.36	0.44
Current IVR + SMS confirmation ($n = 56$)	5.45	0.36
Current IVR + balance update + SMS confirmation ($n = 52$)	5.42	0.45

Table IV. Attitude scores for funds transfer processes

Version	Mean	SD
Current IVR ($n = 109$)	17.34	7.363
Current IVR with updated balance ($n = 109$)	21.77	5.231
Current IVR with SMS confirmation ($n = 51$)	22.27	7.955
Current IVR with updated balance plus SMS confirmation ($n = 58$)	23.04	6.321

Table V. Quality ratings for the alternative funds transfer service

$p < 0.001$ (paired samples t-test). Reducing the quality rating into a rank order results in the data presented in Table VI.

One participant did not complete this question. Several participants ranked versions equally and resulting in higher than 110 responses since in these cases scores were added to both versions involved. The rankings for the versions with SMS confirmations involved smaller number of participants due to the between-participants comparison. There were few differences between the rankings for the two versions incorporating SMS confirmations. More participants rated the IVR version with both the balance update prompt and SMS confirmation second than those who just had the current IVR version with SMS confirmation. Table VII shows the split between the three options each participant experienced, showing a clear preference for the version with SMS confirmation (both with and without the updated balance prompt).

3.3 Qualitative analysis

Some 67 per cent of participants gave positive views about the use of SMS confirmations as "a good idea", "quite helpful" or "excellent", "it provides extra confirmation and reassurance that the transaction had taken place", "it's a written record". Some 18 per cent of participants had negative views about the text message confirmation, mostly security concerns.

Asked to comment about about the IVR service with a balance update prompt, most participants (75 per cent) were positive about the addition of this information commenting that it was a "good idea", "useful", "informative" and a "good and helpful feature". Some 15 per cent also specifically mentioned being reassured that the transaction had gone through as planned. However, some 7 per cent of the participants thought this prompt was unnecessary, commenting that it "feels irrelevant if you didn't want to know it".

A total of 99 per cent of the participants judged that the information provided by text messages was clear. Asked whether the SMS confirmation should be automatic, or whether they would like the choice to get the confirmation message, 62 per cent of participants wanted to be offered the choice. Another 36 per cent wanted it to be

Version	Current IVR		Current IVR + balance update		Current IVR + SMS		Current IVR + balance + SMS	
	n	%	n	%	n	%	n	%
Best	14	13	35	32	34	67	34	63
2nd best	25	23	60	55	4	8	17	29
3rd best	70	64	14	13	13	12	7	12
Total	109		109		51		58	

Table VI.
Rank order for designs (split between experiences)

Ranked best overall	n	%
Current IVR service	14	12.8
Current IVR with balance update	35	32.1
Either SMS confirmation option	68	62.4

Table VII.
Rank order for designs (split between three experiences)

automatically sent by the automated telephone service. This was a significant bias in favour of having the choice, $p = 0.008$ (binomial test).

When asked if they wanted to have the option of entering the phone number on which they would like to receive the SMS confirmation, 50 per cent of participants wanted to be able to do this. They commented that they may have multiple phones, or have changed, lost or had their phone stolen and therefore needed to be able to enter the correct details and ensure the texts arrived to the correct phone: "so you can chose which phone it goes to". Some also commented that this option would be preferable and helpful. However, nearly as many participants commented that they did not think that this would be a good idea, mainly their concerns were about security, about repetition and lengthening the phone call, that it would make the process too complicated, "it would slow it down, a hassle".

Offering the choices of sending the SMS message and/or input of the mobile number raised some additional security issues, such as how secure it would be to input the phone number at the same time as performing the transaction within the IVR, and how long this would take, how prone to errors the process might be. The option of pre-registering a phone number and alternative numbers might be worth investigating. In addition, there is scope for customers to individually indicate their preferences as to whether texts would be automatic or offer a choice of confirmation process. These options show that there is scope for further research on how such services might be implemented and used securely in practice and that, generally, customers needed information on the security of using these services with their mobile phones and text messaging.

Given that the scenarios in the experiment all dealt with confirmations following funds transfer transactions which were initiated by the customer, participants were asked to consider which channels (SMS, letter, phone call or no confirmation) they would prefer the bank to use for confirmations about other banking services. Most participants preferred confirmations to be either via SMS or letter. Letter confirmation was slightly more popular overall, and more preferred for change of address confirmations (71 per cent), complaints handling (62 per cent), PIN changes (64 per cent), new product application progress updates (55 per cent) and setting up new payee or funds transfer arrangements (46 per cent). SMS confirmation was the preferred option for funds transfer transactions (67 per cent), change of phone number confirmations (43 per cent), large credits or one-off debits (46 per cent and 50 per cent), overseas transactions (56 per cent) and debit card purchases over the internet (55 per cent).

4. Discussion

It was anticipated that there would be differences in customer attitudes towards the three different versions of the IVR telephone banking service, but this did not prove to be the case. Based on the questionnaire results overall, attitudes were the same whether or not the participant received an SMS confirmation after a transaction (*H0-1*). Overall, SMS confirmations did increase scores for the attributes "confident transaction was completed", "voice clarity" and "efficiency" compared to the existing IVR version without confirmation. This was not the case for the version of the IVR with updated balance. However, when measured with the quality metric, the existing IVR version without confirmation was rated significantly lower than the versions with SMS confirmation and lower than the version of the IVR with updated balance. There were no differences between the versions with SMS confirmation and the IVR version with updated balance, but reducing the quality ratings to rank order preferences indicated a preference for the versions with SMS confirmations (*H0-2*). Customers clearly judged the utility of a version that confirms the transaction to be higher than one that does not. From a management decision point of view, whilst there is evidence that customers would prefer use of SMS and usability data confirm that SMS would boost confidence that transactions had been were completed, the fact that there was no significant difference in quality scores between the IVR with confirmation added into the call flow, and the IVR with SMS confirmation, was seen as limiting the business case argument, given that the addition of transaction confirmations in the call flow was a cost-effective first step and operational performance could be monitored before addressing the move to SMS confirmations.

From the qualitative comments made by the participants it is clear that some form of confirmation is considered to be a good idea, whether it is an SMS confirmation or an updated balance within the IVR. Participants were positive about an SMS confirmation and the confidence and reassurance it gave, but this was similar picture for an updated balance in the call. A minority (18 per cent) of customers expressed concerns about security regarding SMS confirmations.

The scope for CRM and the ability to send SMS confirmations after banking transactions can be seen as one of this channel's strengths, especially for monetary transactions on an account, where instant confirmation is required and indeed, the results here seem to suggest that for transactions involving payments SMS feedback is desirable, likely to be because of the speed and convenience of SMS. However, a recent survey found that that customers still prefer traditional print mail compared to e-mail communication from their bank (InfoPrint, 2007), and more would revert back to print if it had less of an environmental impact. Other research (Liljander *et al.*, 2007) found that customers for an airline had a "take it or leave" it response to mobile CRM.

No effects on usability for customer age group were found (*H0-3*); unlike in previous research (Peevers *et al.*, 2008). This may suggest usability issues only arise when older participants have to interact with the mobile handset more and instigate the transaction in a pull service. For a push service with actions instigated by the bank, users do not have to interact so much by composing, keying and sending an SMS – they just receive the SMS. It has been argued that some older users of mobile phones can panic when they receive an SMS because they find it intimidating to retrieve the message (Kurniawan, 2008), but this was not indicated in the data presented here. The use of SMS in this context is also more similar to SMS use in general, whereas SMS transactions (Peevers *et al.*, 2008) are a more novel use of SMS.

Although the experiment method described in this paper attempts as much as possible to create a realistic scenario in which the user experiences the various version of the service, with participants assuming personae and scenarios to undertaking prescribed (realistic) tasks, the limitation remains that real-world use of a telephone banking service may differ from the experimental condition in the tasks that customers are attempting when they call and therefore, how well the results transfer into the real world. The confirmation text was programmed to arrive with a delay of 30 seconds which might not always happen in real life.

The experiment was set in ideal, quiet conditions. Confirmation within the IVR call flow may not prove so effective in noisy/out and about environments.

The effectiveness of the service would also depend on the willingness of customers to supply their mobile number to the bank, and the bank keeping accurate records of this over time as numbers change. Also, attitudes might be different when the customer's own account and own money is involved.

Participants were asked to make only one funds transfer with each version in the experiment. A further study involving repeated use to account for learning and familiarisation effects would be of interest.

The experiment failed to deliver any data on the effectiveness of either confirmation method in terms of avoiding next calls (behaviour).

From a management viewpoint, the data reported here fail to provide evidence to support a convincing business case for deployment of SMS as a confirmation channel. In consequence, the business case was only developed by the case bank as far as inclusion of transaction confirmation within the IVR call itself, and not extended to use of SMS. With increasing customer mobility the role of SMS can be expected to continue to gain momentum and importance as a business tool for CRM. An important consideration is that in the short- to medium-term, the mobile channel can be expected to become a key part of multi-channel strategies emerging for the banking sector, establishing the need for more research in the field.

Note

1. The case bank for this research is one of the UK's high street banks.

References

Aladwani, A.M. (2001), "Online banking: a field study of drivers, development challenges, and expectations", *International Journal of Information Management*, Vol. 21 No. 3, pp. 213-25.

Anderson, E.W. and Mittal, V. (2000), "Strengthening the satisfaction-profit chain", *Journal of Service Research*, Vol. 3 No. 2, pp. 107-20.

Brown, I., Cajee, Z., Davies, D. and Stroebel, S. (2003), "Cell phone banking: predictors of adoption in South Africa – an exploratory study", *International Journal of Information Management*, Vol. 23 No. 5, pp. 381-94.

Crosby, L.A. and Johnson, S.L. (2001), "Technology: friend or foe to customer relationships?", *Marketing Management*, Vol. 10 No. 4, pp. 10-11.

Ennew, C.T. and Binks, M.R. (1999), "Impact of participative service relationships on quality, satisfaction and retention: an exploratory study", *Journal of Business Research*, Vol. 46 No. 2, pp. 121-32.

Faulkner, X. and Culwin, F. (2005), "When fingers do the talking: a study of text messaging", *Interacting with Computers*, Vol. 17, pp. 167-85.

Fjermestad, J. and Romano, N.C. Jr (2003), "Electronic customer relationship management: revisiting the general principles of usability and resistance – an integrative implementation framework", *Business Process Management Journal*, Vol. 9 No. 5, pp. 572-91.

Fornell, C. and Wernerfelt, B. (1987), "Defensive marketing strategy by customer complaint management: a theoretical analysis", *Journal of Marketing Research*, Vol. 24, pp. 337-46.

Grabner-Krauter, S. and Kaluscha, E.A. (2003), "Empirical research in on-line trust: a review and critical assessment", *International Journal of Human Computers Studies*, Vol. 58 No. 6, pp. 783-812.

Helenius, J. and Liljander, V. (2005), "Developing brand assets with wireless devices", in Clarke, I. III and Flatherty, T.B. (Eds), *Advances in Electronic Marketing*, Idea Group, Hershey, PA, pp. 176-92.

Hooi Ting, D. (2004), "Service quality and satisfaction perceptions: curvilinear and interaction effect", *International Journal of Bank Marketing*, Vol. 22 No. 6, pp. 407-20.

InfoPrint (2007), InfoPrint Solutions Company, *Marketers Are still not Targeting Their Customers Effectively*, press release, available at: www.infoprintsolutionscompany.com/internet/wwsites.nsf/vwwebpublished/ai_pr030408_marketing_survey_xn

Jamal, A. and Naser, K. (2002), "Customer satisfaction and retail banking: an assessment of some of the key antecedents of customer satisfaction in retail banking", *International Journal of Bank Marketing*, Vol. 20 No. 4&5, pp. 146-61.

Jarvenpaa, S., Lang, K.R., Takeda, Y. and Tuunainen, V.K. (2003), "Mobile commerce at crossroads: an international focus group study of users of mobile handheld devices and services", *Communications, ACM*, Vol. 46 No. 12, pp. 41-4.

Johnston, R. and Mehra, S. (2002), "Best-practice complaint management", *Academy of Management Journal*, Vol. 16 No. 4, pp. 145-54.

Kanniainen, L. (2010), "Alternatives for banks to offer secure mobile payments", *International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 433-44.

Kim, J. and Moon, J.Y. (1998), "Designing emotional usability in customer interfaces trustworthiness of cyber-banking system interfaces", *Interacting with Computers*, Vol. 10, pp. 1-29.

Kim, K. and Prabhakar, B. (2000), "Initial trust, perceived risk, and the adoption of internet banking", *Proceedings of the 21st International Conference on Information Systems, 10-13 December 2000, Brisbane*, pp. 537-543.

Koenig-Lewis, N., Palmer, A. and Moll, A. (2010), "Predicting young consumers' take up of mobile banking services", *International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 410-32.

Kurniawan, S. (2008), "Older people and mobile phones: a multi-method investigation", *International Journal of Human-Computer Studies*, Vol. 66 No. 12, pp. 889-901.

LaLomia, M.J. and Sidowski, J.B. (1990), "Measurements of computer satisfaction, literacy, and aptitudes: a review", *International Journal of Human-Computer Interaction*, Vol. 2 No. 3, pp. 231-53.

Lam, J. and Chan, S.S. (2003), "Exploring CRM implementation on the internet and mobile channels", paper presented at seminar, School of Computer Science, Telecommunication and Information Systems, DePaul University, Chicago, IL.

Landauer, T.K. (1988), "Research methods in human-computer interaction", in Helenader, M. (Ed.), *Handbook of Human-Computer Interaction*, North-Holland, Amsterdam, pp. 905-28.

Laukkanen, T. (2007), "Internet vs mobile banking: comparing customer value perceptions", *Business Process Management Journal*, Vol. 13 No. 6, pp. 788-97.

Laukkanen, T. and Kiviniemi, V. (2010), "The role of information in mobile banking resistance", *International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 372-88.

Laukkanen, T. and Lauronen, J. (2005), "Consumer value creation in mobile banking services", *International Journal of Mobile Communications*, Vol. 3 No. 4, pp. 325-8.

Lee, K.C. and Chung, N. (2009), "Understanding factors affecting trust in and satisfaction with mobile banking in Korea: a modified Delone and Mclean's model perspective", *Interacting with Computers*, Vol. 21 Nos 5-6, pp. 385-92.

Lee, M.S.Y., McGoldrick, P.F., Keeling, K.A. and Doherty, J. (2003), “Using ZMET to explore barriers to the adoption of 3G mobile banking services”, *International Journal of Retail & Distribution Management*, Vol. 31 No. 6, pp. 340-8.

Leverin, A. and Liljander, V. (2006), “Does relationship marketing improve customer relationship satisfaction and loyalty?”, *International Journal of Bank Marketing*, Vol. 24 No. 4, pp. 232-51.

Likert, R. (1932), “A technique for the measurement of attitudes”, *Archives of Psychology*, Vol. 22 No. 140, pp. 1-55.

Liljander, V., Polsa, P. and Forsberg, K. (2007), “Do mobile CRM services appeal to loyalty program customer”, *International Journal of E-business Research*, Vol. 3 No. 2, pp. 24-40.

Lin, H.-H. and Wang, Y.-S. (2006), “An examination of the determinants of customer loyalty in mobile commerce contexts”, *Information and Management*, Vol. 43 No. 3, pp. 271-82.

Luarn, P. and Lin, H. (2005), “Toward an understanding of the behavioral intention to use mobile banking”, *Computers in Human Behavior*, Vol. 21 No. 6, pp. 873-91.

Martin, O. (2010), “Texting was never actually designed for the consumer market”, *The Guardian*, available at: www.guardian.co.uk/business/2010/jan/01/texting-never-designed-for-consumers

(The) Mobile Data Association (2009), *The Q4 2008 UK Mobile Report*, press release, 13 February, available at: www.themda.org/mda-press-releases/the-q4-2008-uk-mobile-trends-report.php

Mort, G.S. and Drennan, J. (2005), “Marketing m-services: establishing a usage benefit typology related to mobile user characteristics”, *Database Marketing & Customer Strategy Management*, Vol. 12 No. 4, pp. 327-41.

Nysveen, H., Pedersen, P.E., Thorbjørnsen, H. and Berthon, P. (2005), “Mobilizing the brand. The effects of mobile services on brand relationships and the main channel use”, *Journal of Service Research*, Vol. 7 No. 3, pp. 257-76.

O’Loughlin, D., Szmigin, I. and Turnball, P. (2004), “From relationships to experiences in retail financial services”, *International Journal of Bank Marketing*, Vol. 22 No. 7, pp. 522-39.

Okazaki, S. (2005), “New perspective on m-commerce research”, *Journal of ElectroniCommerce Research*, Vol. 6 No. 3, pp. 160-4.

Ornella, P. and Stephanie, B. (2006), “Universal designs for mobile phones: a case study”, *Computer Human Interaction 2006*, Work in Progress, Quebec.

Peevers, G. and McInnes, F. (2009), “Laboratory studies”, in Love, S. (Ed.), *Handbook of Mobile Technology Research Methods*, Nova, Hauppauge, NY.

Peevers, G., Douglas, G. and Jack, M.A. (2008), “A usability comparison of three alternative message formats for an SMS banking service”, *International Journal of Human-Computer Studies*, Vol. 66 No. 2, pp. 113-23.

Peevers, G., McInnes, F., Morton, H., Matthews, A. and Jack, M.A. (2009), “The mediating effects of brand music and waiting time updates on customers’ satisfaction with a telephone service when put on-hold”, *International Journal of Bank Marketing*, Vol. 27 Nos 2/3, pp. 202-17.

Pousttchi, K. and Schurig, M. (2004), “Assessment of today’s mobile banking applications from the view of customer requirements”, *Proceedings of the 37th Hawaii International Conference on System Sciences, IEEE, Big Island, January*.

Richardson, A. (2005), “Turning transactions into relationships: metrics for usability in the financial services sector”, PhD thesis, University of Edinburgh, Edinburgh.

Riquelme, H.E. and Rios, R.E. (2010), "The moderating effect of gender in the adoption of mobile banking", *International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 328-41.

Root, R.W. and Draper, S. (1983), "Questionnaires as a software evaluation tool", *Proceedings of CHI 83*, ACM, New York, NY.

Rumpa, G. (2005), "Are you banking more on your mobile?" *Times of India*, 6 February, available at: http://timesofindia.indiatimes.com/articleshow/1013140.cms

Sillence, E. and Baber, C. (2004), "Integrated digital communities: combining and competition", *Interacting with Computers*, Vol. 16 No. 1, pp. 93-113.

Smith, W.R. (1956), "Product differentiation and market segmentation as an alternative marketing strategies", *Journal of Marketing*, Vol. 21 No. 1, pp. 3-8.

Storbaka, K. (1997), "Segmentation based on customer profitability – retrospective analysis of retail bank customers bases", *Journal of Marketing Management*, Vol. 13 No. 5, pp. 479-92.

Suh, B. and Han, I. (2002), "Effect of trust on customer acceptance of internet banking", *Electronic Commerce Research and Applications*, Vol. 1 No. 3, pp. 247-63.

Suoranta, M. (2003), "Adoption of mobile banking in Finland", *Jyvaskyla Studies in Business and Management 28*, PhD, Jyvaskyla.

Tiwari, R., Buse, S. and Herstatt, C. (2007), "Mobile services in banking sector. The role of innovative business solutions in generating competitive advantage", *Proceedings of the 8th International Research Conference on Quality, Innovation and Knowledge Management, New Delhi, 11-14 February*.

Walsh, S., Gilmore, A. and Carson, D. (2004), "Managing and implementing simultaneous transaction and relationship marketing", *International Journal of Bank Marketing*, Vol. 22 No. 7, pp. 468-83.

Weir, C.S. (2008), "Investigating the relationship between usability, preferences and usage intentions when banking online", PhD thesis, University of Edinburgh, Edinburgh.

Weir, C.S., Anderson, J.A. and Jack, M.A. (2006), "On the role of metaphor and language in design of third party payments in e-banking: usability and quality", *International Journal of Human-Computer Studies*, Vol. 64 No. 8, pp. 771-85.

Weir, C.S., McKay, I. and Jack, M.A. (2007), "Functionality and usability in design for e-statements in e-banking services", *Interacting with Computers*, Vol. 19 No. 2, pp. 241-56.

Weir, C.S., Douglas, G., Carruthers, M. and Jack, M.A. (2009a), "User perceptions of security, convenience and usability for e-banking authentication tokens", *Journal of Computers and Security*, Vol. 28 No. 1, pp. 47-62.

Weir, C.S., Douglas, G., Richardson, T. and Jack, M.A. (2009b), "Usable security: user preferences for authentication methods in e-banking and the effects of experience", *Interacting with Computers*, Vol. 22 No. 3, pp. 153-64.

Zeithaml, V.A., Rust, R.T. and Lemon, K.N. (2001), "The customer pyramid: creating and serving profitable customers", *California Management Review*, Vol. 43 No. 4, pp. 118-42.

About the authors

G. Peevers holds a BA (Hons) in Artificial Intelligence and MSc in HCI, both from the University of Sussex, UK. He has been a Research Fellow at Edinburgh University since April 2004. His main interest is in usability and HCI in the banking sector. His thesis is about investigating applications of mobile banking. G. Peevers is the corresponding author and can be contacted at: gareth.peevers@ed.ac.uk

G. Douglas graduated in 1996 from the University of Edinburgh with a BSc (Hons) in Mathematical Physics. He completed a PhD in 1999, again at the University of Edinburgh. His

work at CCIR includes studies of e-banking web portals, mobile services (including SMS/MMS banking), contact centre technologies, online self-help financial tools, eCRM solutions and two factor authentication methods.

D. Marshall graduated from the University of Edinburgh in 1995 with a MEng (Hons) degree in Electronics. His MEng project with GEC Plessey Semiconductors (Swindon) involved looking at demodulation and decoding techniques for digital radios. His work has included user trials on automated telephone services, EPGs and interactive television, and alphanumeric data entry techniques.

M.A. Jack is Director of CCIR. Research concerns the need to optimise use of new technologies for mass-market access to consumer channels, such as telephone and internet banking, where his research on usability engineering is being used to create improved user interface designs for these mass channels. An author of some 240 papers and three textbooks, Professor Jack is a Fellow of the Royal Society of Edinburgh and a Fellow of the Institution of Electrical Engineers.

Received January 2010
Revised September 2010
Accepted November 2010

Bank service quality: comparing Canadian and Tunisian customer perceptions

Riadh Ladhari
Faculty of Business Administration, Laval University, Quebec City, Canada
Ines Ladhari
Higher Institute of Management of Sousse, Sousse, Tunisia, and
Miguel Morales
Sobey School of Business, Saint Mary's University, Halifax, Canada

Abstract

Purpose – The aim of this paper is to compare perceptions of bank service quality among Tunisian and Canadian customers, and to determine which dimensions of service quality make the greatest contribution to overall customer satisfaction and loyalty.

Design/methodology/approach – Data were collected using self-administered questionnaires from two convenience samples of bank customers (250 in Canada and 222 in Tunisia). Service quality was measured using the five SERVQUAL dimensions of tangibles, reliability, responsiveness, assurance, and empathy. Data were analyzed using confirmatory factor analysis, ANOVA and linear regression.

Findings – Respondents in both countries reported high levels of perceived service quality in banks. However, Canadians reported higher perceived service quality than Tunisians for all five SERVQUAL dimensions, and for 21 of the 22 individual items. In the Canadian sample, empathy and reliability were found to be the most important predictors of satisfaction and loyalty, while in the Tunisian sample, reliability and responsiveness were the most important predictors of satisfaction and loyalty.

Practical implications – Canadian bank managers should recognize the importance of "empathy" in service delivery by implementing appropriate customer-oriented strategies. Tunisian bank managers should focus on performing promised services dependably and accurately.

Originality/value – Despite the large number of studies on individual countries, few studies compare bank service quality among different countries. The present study compares perceptions of bank service quality between consumers in two countries – Canada and Tunisia – that have different economic and cultural environments.

Keywords Banks, Customer services quality, Cross-cultural studies, Individual perception, Canada, Tunisia

Paper type Research paper

1. Introduction

In the banking industry, as in other service industries, providing superior service quality enhances customer satisfaction and contributes to profitability. Superior service quality lowers customer defection, enhances customer loyalty, provides opportunities for cross-selling, increases word-of-mouth recommendation, and enhances corporate image (Arasli *et al.*, 2005a; Baumann *et al.*, 2007; Cronin *et al.*, 2000; Ehigie, 2006; Jun and Cai, 2001; Nguyen and Leblanc, 1998; Wang *et al.*, 2003). In addition, outstanding service quality facilitates the development and maintenance of

International Journal of Bank Marketing
Vol. 29 No. 3, 2011
pp. 224-246

0265-2323
DOI 10.1108/02652321111117502

long-term relationships with customers, which is especially important in the competitive business environment of modern banking (Camarero, 2007; Hawke and Heffernan, 2006).

A great deal of research exists on service quality in the banking sector. To measure service quality and identify the dimensions that customers consider in evaluating bank services, the most commonly used research instrument is SERVQUAL (Parasuraman *et al.*, 1988). This generic scale for measuring service quality in a variety of service sectors is used in most studies of bank service quality (Arasli *et al.*, 2005b; Chi Cui *et al.*, 2003; Lam, 2002; Mels *et al.*, 1997; Othman and Owen, 2001; Zhou, 2004; Zhou *et al.*, 2002). In addition to the SERVQUAL scale, alternative instruments are available for specific use in the banking sector (Avkiran, 1994; Bahia and Nantel, 2000; Aldlaigan and Buttle, 2002; Jabnoun and Al-Tamimi, 2003; Karapte *et al.*, 2005; Guo *et al.*, 2008), but they have not been used as extensively as SERVQUAL.

Studies on bank service quality have been conducted in a variety of countries, including: Canada (Bahia and Nantel, 2000); the United Arab Emirates (Jabnoun and Al-Tamimi, 2003); China (Lam, 2002; Guo *et al.*, 2008); South Africa (Mels *et al.*, 1997); Cyprus (Karapte *et al.*, 2005); the UK (Aldlaigan and Buttle, 2002); Nigeria (Ehigie, 2006); South Korea (Chi Cui *et al.*, 2003); Kuwait (Othman and Owen, 2001); Australia (Avkiran, 1994; Baumann *et al.*, 2007); and Malaysia (Amin and Isa, 2008), to name just a few. Despite the large number of studies on individual countries, few studies compare bank service quality among different countries, (Dash *et al.*, 2009; Glaveli *et al.*, 2006; Lewis, 1991; Malhotra *et al.*, 2005). Such studies are particularly scarce between developed and developing countries. However, cross-cultural service quality studies have become increasingly relevant as international business flourishes along with a more integrated global banking environment (Arasli *et al.*, 2005a; Dash *et al.*, 2009).

The purpose of the present study is, therefore, to compare perceptions of bank service quality between consumers in two countries—Canada and Tunisia—that have different economic and cultural environments. Canada is one of the world's wealthiest developed countries. As one of the ten largest economies in the world, Canada's service sector accounts for more than two-thirds of gross domestic product (GDP) and employs nearly three-quarters of the workforce (Statistics Canada, 2010). In contrast, although Tunisia is an emerging economy, it has one of the highest per-capita GDPs in Africa and is ranked as the most competitive economy on the African continent (and the 40th in the world) by the World Economic Forum (www.weforum.org). The service sector in Tunisia accounted for about 40 percent of the GDP and employed half of the working population in 2006 (OECD, 2008).

Culturally, Canada and Tunisia are quite different, as measured by Hofstede's cultural dimensions. Tunisian society receives high scores for "collectivism" and "power distance", while Canada tends to be more "individualistic" and receives low scores for "power distance" (Hofstede, 2001). Owing to cultural and economic factors, service users in these two countries are expected to have different criteria for service quality.

The objectives of this unique study are twofold. The first is to compare bank service quality as perceived by Tunisian and Canadian service users. The comparison uses the five dimensions (and corresponding 22 items) of the SERVQUAL instrument. The second objective is to examine the contribution made by each of the five SERVQUAL dimensions in explaining overall customer satisfaction and loyalty.

The remainder of this paper is organized as follows: after this introduction, the next section reviews the literature on perceived service quality and its relationship to overall satisfaction and loyalty in the context of bank services. The following section describes the methodology used in the empirical study of bank customers in Canada and Tunisia, including the sampling procedure and the composition of the questionnaire. The paper then presents the findings of the empirical study and concludes with a discussion of the major findings, limitations, and managerial implications.

2. Literature review

2.1 Perceived service quality measurement

Perceived service quality refers to consumer judgment about a service provider's overall excellence (Parasuraman *et al.*, 1988). This judgment is the result of the difference between what a customer believes a service provider should offer (expectations) and his perception of the actual performance of the service (Parasuraman *et al.*, 1988).

Numerous models exist that measure service quality, including the well-known SERVQUAL instrument (Parasuraman *et al.*, 1988; Ladhari, 2009a) based on the assumption that perceived service quality derives from the consumer's comparison of expected service and actual service performance (Grönroos, 1984; Parasuraman *et al.*, 1988). SERVQUAL measures five dimensions:

(1) "tangible elements" (appearance of equipment, physical facilities, and personnel);
(2) "reliability" (ability to perform the promised service accurately and dependably);
(3) "responsiveness" (willingness to help customers and provide prompt service);
(4) "assurance" (courteous and knowledgeable employees who can inspire confidence and trust); and
(5) "empathy" (personalized attention and care).

The SERVQUAL questionnaire includes two batteries of 22 items each, measuring customer expectations and perceptions of the service actually received.

This model, originally developed and validated among customers of a credit card company, a long-distance telephone company, an appliance repair-and-maintenance services firm, and a bank (Parasuraman *et al.*, 1988), has now been applied to a wide variety of service industries, including telecommunication (Van der Wal *et al.*, 2002); health care (Kilbourne *et al.*, 2004); restaurants (Lee and Ulgado, 1997); insurance (Mels *et al.*, 1997); retail chains (Parasuraman *et al.*, 1985); information systems (Jiang *et al.*, 2000); and libraries (Cook and Thompson, 2001). The SERVQUAL instrument has been used in countries that include the US (Kilbourne *et al.*, 2004; Lai, 2006), China (Zhou *et al.*, 2002), Australia (Baldwin and Sohal, 2003), Hong Kong (Lam, 1997) and Cyprus (Arasli *et al.*, 2005b). However, despite its widespread use, SERVQUAL is not without its critics, especially with regard to its reliability and validity (convergent, discriminant, and predictive), the use of difference scores, and the stability of its factor structure (Ladhari, 2009a).

The assumption that service quality is determined by the difference between expectations and perception has been extensively debated in the literature. The relevance of using difference scores (i.e. gap scores) to represent service quality has been questioned on both conceptual and empirical grounds. Brown *et al.* (1993)

question the validity of the difference scores, claiming that they are not distinct from perception and expectation scores. Babakus and Boller (1992) report that the perception scores are the principal contributor to the perception-minus-expectation scores. Peter *et al.* (1993) report that difference scores have poor reliability. Other researchers find that SERVPERF (i.e. performance scores) outperforms SERVQUAL (i.e. perception-minus-expectation scores) in predicting overall service quality (Angur *et al.*, 1999) and satisfaction (Nam, 2008). Cronin and Taylor (1992) claim that SERVPERF is a more appropriate approach for measuring service quality, noting that using the SERVPERF scale reduces the required number of statements in the questionnaire from 44 to 22.

The validity of the SERVQUAL instrument in the banking sector elicits mixed results (Mels *et al.*, 1997; Lam, 2002; Zhou *et al.*, 2002; Chi Cui *et al.*, 2003; Zhou, 2004; Arasli *et al.*, 2005a). For example, Lam (2002) uses the SERVQUAL instrument in Macau's (China) banking sector and finds six (rather than five) dimensions:

(1) "tangibles";
(2) "reliability";
(3) "responsiveness";
(4) "assurance";
(5) "empathy 1" (called "tacit understanding of needs"); and
(6) "empathy 2" ("convenient operating hours").

Arasli *et al.* (2005b) apply SERVQUAL in the Cyprus banking sector and identify only three dimensions:

(1) "tangibles";
(2) "reliability"; and
(3) "responsiveness–empathy" (which includes items from the original "responsiveness" and "empathy" dimensions).

The "assurance" dimension was eliminated in this study due to inadequate factor loadings. Ladhari (2009b) examines the psychometric properties of the SERVQUAL scale in the Canadian banking industry. The empirical study supports the dimensionality (i.e. five-dimensional structure), reliability, convergent validity, discriminant validity, and nomological validity of the SERVQUAL scale. The author concludes that SERVQUAL is a suitable scale for measuring bank services in Canada.

In addition to these studies that use SERVQUAL to measure service quality in banks, other researchers propose alternative scales for measuring bank service quality. Bahia and Nantel (2000) use the ten dimensions originally proposed by Parasuraman *et al.* (1985) to develop a six-dimension scale:

(1) "reliability";
(2) "tangibles";
(3) "access";
(4) "effectiveness and assurance";
(5) "range of services" (or "services portfolio"); and
(6) "prices".

Othman and Owen (2001) report six dimensions of perceived service quality in the context of Islamic banking: the five SERVQUAL dimensions ("tangibles", "reliability", "responsiveness", "assurance"; "empathy") and an extra dimension, "compliance with Islamic law". This last dimension refers to the ability of the company to operate under the principles of Islamic banking and economy. Aldlaigan and Buttle (2002) use the distinction between technical and functional service quality suggested by Grönroos (1984) to develop a scale comprised of four dimensions:

(1) "behavioral service quality";

(2) "service system quality";

(3) "machine service quality"; and

(4) "service transactional accuracy".

Jabnoun and Al-Tamimi (2003) propose a modified version of SERVQUAL comprising three dimensions:

(1) "empathy" (consisting mainly of items originally belonging to the "reliability" and "assurance" dimensions of SERVQUAL);

(2) "tangibles" (items belonging to the "tangibles" dimension of SERVQUAL); and

(3) "human skill" (items originally included in the "assurance" and "reliability" dimensions of SERVQUAL).

Karatepe *et al.* (2005) propose a scale of four dimensions for measuring bank service quality in Northern Cyprus:

(1) "empathy";

(2) "service environment" (related to the "tangibles" dimension of SERVQUAL);

(3) "reliability"; and

(4) "interaction quality" (a combination of the "assurance" and "responsiveness" dimensions of SERVQUAL).

Finally, in the corporate banking sector, Guo *et al.* (2008) present a bank service-quality measure for China comprising two higher-order constructs ("technical quality" and "functional quality") and four lower-order dimensions ("technology", "communication", "reliability", and "human capital"; see Table I).

Most of the dimensions in these alternative measurement instruments are similar to those of SERVQUAL. The few that differ probably reflect the particular characteristics of bank service quality in specific contexts (for example, "compliance with Islamic law" in the case of Islamic banks). However, most of these alternative scales have not been replicated and their validity has not been evaluated.

2.2 Perceived service quality: cross-cultural studies

Several studies examine the impact of culture on consumer expectations, consumer reactions to service experience, and subsequent consumer behaviors (e.g. Furrer *et al.*, 2000; Herbig and Genestre, 1996; Malhotra *et al.*, 2005; Voss *et al.*, 2004; Winsted, 1997). For example, Furrer *et al.* (2000) report that the importance of the five SERVQUAL dimensions is correlated with the Hofstede dimensions (power distance, individualism, masculinity, uncertainty avoidance, and long-term orientation). Herbig and Genestre

Study	Country	Sample size	Scale and dimensions	Reliability (range)
Avkiran (1994)	Australia	791 bank customers	17 items; perception minus expectation scores; five-point Likert scale 4 dimensions: staff conduct (7), credibility (3), communication (5), access to teller services (2)	0.80-0.88
Bahia and Nantel (2000)	Canada	115 bank customers	31 items; perception and expectation scores; seven-point Likert scale 6 dimensions: effectiveness and assurance (13), access (5), price (5), tangibles (4), services portfolio (2), reliability (2)	0.78-0.96
Aldlaigan and Buttle (2002)	UK	975 bank customers	21 items; perception-only scores; seven-point Likert scale 4 dimensions: service system quality (11), behavioural service quality (5), machine service quality (2), service transactional accuracy (3)	0.80-0.93 (total sample)
Sureshchandar *et al.*	India	277 bank customers	41 items; perception-only scores; seven-point Likert scale 5 dimensions: core service or service product (5), human element of service delivery (17), systemization of service delivery (6), tangibles of service (6), social responsibility (7)	0.82-0.96
Jabnoun and Al-Tamimi (2003)	United Arab Emirates	462 bank customers	22 items; perception-only scores; seven-point Likert scale 3 dimensions: human skills (12), tangibles (5), empathy (5)	0.77-0.93
Jabnoun and Khalifa	United Arab Emirates	115 customers of Islamic banks and 115 customers of conventional banks	29 items; perception-only scores; seven-point Likert scale 4 dimensions: personal skills (12), reliability (5), image (6), value (6)	0.85-0.94

(*continued*)

Table I.
Summary of selected studies on bank service quality measurement

Study	Country	Sample size	Scale and dimensions	Reliability (range)
Karatepe *et al.* (2005)	Cyprus	1,220 customers	20 items; perception-only scores; five-point Likert scale 4 dimensions: service environnement (4), interaction quality (7), empathy (5), reliability (4)	0.81-0.92
Guo *et al.* (2008)	China	259 corporate customers	20 items; perception and expectation scores; seven-point Likert scale 2 higher order constructs and 4 second order constructs: functional quality composed of reliability (3) and human capital (7); and technical quality including communication (6) and technology (4)	0.88-0.93
Nam (2008)	US and South Korea	129 student residents of the US (born in 29 different countries) and South Korea	23 items; perception-only scores; seven-point Likert scale 4 dimensions: helpful employees, functionality, appearance and trustworthiness	0.72-0.85

Table I.

(1996) find that Mexican respondents rate service quality higher than US respondents. Zhang *et al.* (2008) review several empirical studies and identify consistent results showing that service users from different countries and cultural backgrounds record different expectations, react differently to service encounters, and show dissimilar behavioral intentions. Sultan and Simpson (2000) show that nationality influences expectations and perceived performance. For instance, they report that European passengers rate both US and European airlines significantly lower than US passengers. Indeed, they report that US passengers express higher expectations than European passengers. Voss *et al.* (2004) find that UK and US customer reaction to good service is similar, but UK customers are more tolerant of poor service quality than US customers.

In the banking sector, only a few studies examine differences in perceived service quality across countries (Lewis, 1991; Malhotra *et al.*, 2005). Lewis (1991) investigates consumer expectations and perceptions of banks in the UK and US, reporting a number of similarities and differences. The author finds that US respondents record higher expectations for locations, opening hours, parking, and personal characteristics of bank staff whereas UK respondents are more concerned about privacy, interiors, and staff appearances. US respondents rate parking and location higher whereas UK customers are more satisfied with the personal characteristics of staff and bank responsiveness to their needs (e.g. opening hours, prompt service, availability of information by telephone, number of staff available to serve). Malhotra *et al.* (2005) find differences in the perception of service quality dimensions between developed and developing economies. For instance, respondents in their study report that banks in developed countries (US) exhibit more sophisticated relationship marketing than those in developing countries (India and Philippines). Malhotra *et al.* (2005) state that "due to cultural and environmental differences, consumers of services in different countries may have different perceptions of what service quality is". Glaveli *et al.* (2006) compare bank customers from five Balkan countries (Greece, Bulgaria, Serbia, Albania, and FYROM), finding that Greeks perceive higher level of service quality. Finally, Dash *et al.* (2009) find that cultural dimensions, both at the individual and national levels, affect the importance of various SERVQUAL dimensions. For instance, Canadian Indian consumers attach higher importance to reliability while Indian consumers find tangible attributes more important.

2.3 The relationship between service quality and overall satisfaction

Satisfaction is defined here as an overall judgement at the cumulative level of bank services received by customers. Satisfaction is determined by satisfying and dissatisfying service encounters with the bank over time.

Previous studies demonstrate that perceived service quality has a positive influence on customer satisfaction in a variety of service settings. Cronin and Taylor (1992) report that perceived service quality has a positive effect on consumer satisfaction in four service settings: dry cleaning, banking, pest control, and fast food. Cronin *et al.* (2000) find that perceived service quality has a positive effect on satisfaction in several other service settings. Similarly, Bei and Chiao (2006) report a significant relationship between service quality and satisfaction in three service industries: automobile repairs, petrol stations, and banking. In the bank setting, Aldlaigan and Buttle (2002) identify significant correlations between service quality dimensions and overall satisfaction. Johnston (1995) attempts to identify which attributes of bank service quality create satisfaction or dissatisfaction. The author reports that attributes related to assurance, empathy, responsiveness, and reliability are the most frequently cited sources of satisfaction. Zhou (2004) reports that the reliability/assurance dimension of bank service quality has a significant impact on satisfaction. However, two dimensions, tangibles and empathy/responsiveness, have no significant impact.

Brady *et al.* (2005) show that service quality has a direct impact on satisfaction in five countries: the USA, Australia, The Netherlands, Hong Kong, and Morocco. Kassim and Souiden (2007) report a positive effect of service quality on satisfaction in the retail banking sector in the United Arab Emirates while Arasli *et al.* (2005b) finds a similar relationship in the Greek Cypriot banking industry. The latter study uses a revised SERVQUAL scale (including three dimensions: "tangibles", "reliability", and "responsiveness-empathy"), with the "reliability" dimension having the greatest effect on overall satisfaction.

2.4 Relationship between service quality and loyalty

Loyalty is defined here as "a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" (Oliver, 1999). Loyalty in this study refers to the continuing patronage of a particular bank by a client over time. Loyalty should be the prime objective of company strategy. It has been shown that the increase in profit resulting from a 5 percent increase in retention varies between 25 and 85 percent.

The theoretical relationship between perceived service quality and loyalty has been confirmed empirically in several studies (Bloemer *et al.*, 1998; Boulding *et al.*, 1993; Cronin *et al.*, 2000; Fornell, 1992). Cronin *et al.* (2000) report that perceived service quality has a significant positive effect on behavioral intentions (loyalty and recommendation) in four service industries (fast food, spectator sports, participation sports, and entertainment). However, the positive effect was not significant in health care and long distance carriers. In the retail banking sector, Bloemer *et al.* (1998) and Karapte *et al.* (2005) both find that quality has both a direct influence and an indirect influence (through satisfaction) on loyalty. Baumann *et al.* (2007) find that overall satisfaction, affective attitude, and empathy predict loyalty. Ehigie (2006) finds that perceived service quality and satisfaction are important predictors of loyalty among bank customers in Nigeria.

3. Empirical study

3.1 Research questions

An empirical study was conducted to address these research questions:

RQ1. Are there differences between the levels of service quality perceived by Tunisian versus Canadian bank customers?

RQ2. Which dimensions of service quality contribute most to overall satisfaction and to loyalty in Tunisian and Canadian bank contexts?

3.2 Sample and data collection

Data were gathered in 2009 from bank customers in Canada and Tunisia. Self-administered questionnaires were distributed to a convenience sample of customers using the mall-intercept method. Research assistants at mall entrances asked potential respondents to complete a survey dealing with bank service quality. The objective was 200 to 250 completed questionnaires for each country. The questionnaire was initially written in English and translated to French, using a back-translation procedure. In Canada, the survey was administered in English and French, and in Tunisia only in French. In Canada, 264 completed questionnaires were collected, with 14 incomplete questionnaires eliminated, leaving 250 valid questionnaires for further analysis. In Tunisia, 229 completed questionnaires were collected, with seven incomplete ones eliminated, leaving 222 questionnaires for further analysis in the Tunisian sample.

In the Canadian sample, the majority of respondents were female (52 percent) and 40.1 percent of respondents had an annual income of less than CAD $20,000, 39.2 percent had an annual income of $20,000–$59,999, and 20.7 percent had an annual income of $60,000 or more. In terms of education, 61.9 percent of the respondents had a university degree, 16 percent had a college education, 18 percent had a secondary school education, and 4.1 percent had a primary school education. In the Tunisian sample, a majority of the respondents were male (57.3 percent). In terms of income, 16.9 percent of the respondents had an annual net income of less than TND (Tunisian Dinar) 6,000; 33.3 percent had an annual net income of TND 6,000–8,999; 42.6 percent had an annual net income of TND 9,000–17,999; and 7.2 percent had an annual net income of TND 18,000 and above. These Canadian and Tunisian income bands were chosen because they are broadly comparable in terms of standard of living in the two countries. In education, 65.9 percent of the Tunisian respondents had a university degree, 27.6 percent had a secondary school education, and 6.5 percent had a primary school education.

3.3 Measures

3.3.1 Service quality. The performance-only items of the SERVQUAL instrument were used to measure service quality. SERVQUAL was chosen because:

- despite criticisms, it remains the most widely used measurement instrument in the service-quality literature; and
- the scale was judged a more useful instrument than alternative scales (most of which are based on the SERVQUAL model anyway).

Performance-only items (i.e. SERVPERF model) were chosen for the study because:

- this facilitates comparison of findings with previous studies that have not used the difference scores (e.g. Zhou, 2004);
- the gap scores may have poor reliability (Peter *et al.*, 1993) and validity (Brown *et al.*, 1993);
- the predictive accuracy of the SERVPERF (performance-only) scale may be greater than that of the SERVQUAL (gap score) scale (Carrilat *et al.*, 2007); and
- the SERVPERF model may be a more reliable measure of banking service quality (Ladhari, 2009b).

Perceived service quality was therefore measured using the 22 items representing the five SERVQUAL dimensions as follows:

(1) *tangibles:* measured using four items (for example, "XYZ bank's physical facilities are visually appealing");

(2) *reliability:* measured using five items (for example, "When XYZ bank promises to do something by a certain time, it does so");

(3) *responsiveness:* measured using four items (for example, "Employees of XYZ bank are always willing to help me");

(4) *assurance:* measured using four items (for example, "Employees of XYZ bank have sufficient knowledge to answer my questions"); and

(5) *empathy:* measured using five items (for example, "Employees of XYZ bank understand my specific needs").

A full list of the items appears in the "Results" section of this paper. Respondents were asked to respond to each of the 22 items on a seven-point Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (7).

The reliability and validity of the SERVQUAL scale was assessed by mean of confirmatory factor analysis (CFA) performed using maximum likelihood estimation and robust method. The Satorra-Bentler statistic (S-Bχ^2) value was 335.0473 ($p < 0.001$). The chi-squared ratio (by degrees of freedom) was 1.684 (<3, acceptable). The other fit indices were all within an acceptable range. The non-normed fit index (NNFI) was 0.927 and the comparative fit index (CFI) was 0.937 (NNFI and CFI values of 0.90 and above suggest adequate fit). The root mean square error of approximation

(RMSEA) was 0.057, with confidence interval from 0.050 to 0.063. These results suggest a good fit of the model to the data.

The reliability of the five SERVQUAL dimensions was evaluated using the composite reliability index (ρ). The values were 0.859, 0.894, 0.871, 0.897, and 0.856 for tangibles, reliability, responsiveness, assurance, and empathy, respectively. Convergent validity was assessed considering the loadings of the 22 items and the average variance extracted (AVE) criteria. The results of the CFA revealed that all 22 item-loadings were significant. All loadings were statistically significant at the 0.05 level ($t > 1.96$). The AVE for each of the factors were: 0.607 for "tangibles", 0.631 for "reliability", 0.629 for "responsiveness", 0.688 for "assurance", and 0.576 for "empathy". These results support the convergent validity of the SERVQUAL scale scores. The discriminant validity was supported, as the AVE for each pair of variables was greater than the squared correlation for the same pair. For instance, the squared correlation between tangibles and reliability was 0.355, a lower value than the AVE associated with tangibles (0.607) and reliability (0.631). Predictive validity of the scale scores was assessed by undertaking a correlation analysis of each of the five SERVQUAL dimensions with satisfaction and loyalty. All correlations were significant; the results confirm the predictive validity of the scale (Table II).

Constructs and items	Standardized loadings	Robust *t*-values
Tangibles		
I1	0.859	–
I2	0.840	25.927
I3	0.694	13.224
I4	0.708	15.046
Reliability		
I5	0.826	–
I6	0.854	19.429
I7	0.783	20.486
I8	0.884	23.729
I9	0.590	9.432
Responsiveness		
I10	0.734	–
I11	0.841	16.311
I12	0.861	16.764
I13	0.727	13.014
Assurance		
I14	0.898	–
I15	0.898	31.177
I16	0.801	17.105
I17	0.705	11.922
Empathy		
I18	0.912	–
I19	0.199	3.722
I20	0.908	27.691
I21	0.748	16.787
I22	0.788	21.209

Table II.
Construct measurement summary

3.3.2 Dependent variables. The dependent variables in the study were measured as follows:

- *Satisfaction.* Measured using one item: "Overall, I am satisfied with the services provided by XYZ bank".
- *Loyalty.* Measured using one item: "XYZ bank is always my first choice".

Respondents were asked to respond to these two items on a seven-point Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (7).

Several studies in the service domain have retained mono-item measures for measuring satisfaction and loyalty (e.g. Cronin and Taylor, 1992).

4. Results

4.1 Canadian and Tunisian perceptions of bank service quality

Canadian respondents and Tunisian respondents both responded that bank service was of a high quality. However, in general, Canadian respondents perceived higher levels of service quality than their Tunisian counterparts.

4.1.1 Dimensional analysis. The five SERVQUAL dimensions showed scores between 5.25 and 5.99 for Canadian respondents and between 4.30 and 4.90 for Tunisian respondents (see Table III). The highest scores for both the Canadian respondents and the Tunisian respondents were recorded on the "assurance" dimension, followed by the "tangibles" dimension. The lowest scores for both Canadian and Tunisian respondents were on the "empathy" dimension.

ANOVA was performed to assess whether there were statistically significant differences between the perceptions of Canadian bank customers and Tunisian bank customers for the five SERVQUAL dimensions. Table III shows that there were significant differences ($p = 0.00$) between Tunisian and Canadian respondents on all five SERVQUAL dimensions. For instance, the mean score for Canadian respondents on responsiveness was 5.65 while Tunisians scored 4.63, a significant difference ($F = 90.024, p = 0.000$). The mean score for Canadian respondents on empathy was 5.25 while Tunisians reported 4.30, a significant difference ($F = 61.381, p = 0.000$) (see Table III).

4.1.2 Item analysis. On an item basis, the mean scores for all 22 SERVQUAL items were greater than four in the Canadian sample; indeed, 21 of the 22 items had mean scores greater than five (the mean score on item 19 was 4.49). In the Tunisian sample, 19 of the 22 items showed mean scores greater than four; the other three items (18, 20, and 22) showed mean scores slightly less than four.

For Canadian respondents, the highest perception scores were for item 3 ("XYZ bank's employees have a neat appearance") (6.08), followed by item 15 ("I feel safe in

Items	Canadian ($n = 250$)	Tunisian ($n = 222$)	*F*	Sig.
Tangibles	5.72	4.77	76.604	0.000
Reliability	5.58	4.71	59.110	0.000
Responsiveness	5.65	4.63	90.024	0.000
Assurance	5.99	4.90	84.915	0.000
Empathy	5.25	4.30	61.381	0.000

Table III. Canadian and Tunisian perceptions of bank service quality on dimensional basis my transactions with XYZ bank") (6.07), and item 16 ("Employees of XYZ bank are consistently courteous to me") (6.02). The lowest score was for item 19 ("XYZ bank has operating hours that are convenient to all its customers") (4.49). For Tunisian respondents, the highest scores were for item 19 ("XYZ bank has operating hours convenient to all its customers") (5.45), followed by item 3 ("XYZ bank's employees have a neat appearance") (5.13), and item 17 ("Employees of XYZ bank have sufficient knowledge to answer my questions") (5.06). The lowest scores were for item 18 ("XYZ bank gives me individual attention") (3.99), item 22 ("Employees of XYZ bank understand my specific needs") (3.95), and item 20 ("XYZ bank has employees who give me personal attention") (3.91).

Table IV which includes the results of ANOVA analyses done on an item-by-item basis, shows significant differences at the 5 percent level between Tunisian respondents and Canadian respondents on all 22 SERVQUAL items. For instance, Canadian respondents reported a higher mean score on item 5 ("When XYZ bank promises to do something by a certain time, it does so") than that reported by Tunisian respondents (5.60 vs 4.86); the difference was significant ($F = 28.894, p = 0.000$).

Items	Canadian ($n = 250$)	Tunisian ($n = 222$)	F	Sig.
1. XYZ bank has modern-looking equipment	5.86	4.78	65.572	0.000
2. XYZ bank's physical facilities are visually appealing	5.52	4.72	34.089	0.000
3. XYZ bank's employees are neat-appearing	6.08	5.13	61.139	0.000
4. Materials associated with the service (such as pamphlets or statements) are visually appealing at XYZ bank	5.44	4.50	45.305	0.000
5. When XYZ bank promises to do something by a certain time, it does so	5.60	4.86	28.894	0.000
6. When you have a problem, XYZ bank shows a sincere interest in solving it	5.72	4.82	43.114	0.000
7. XYZ bank performs the service right the first time	5.20	4.33	37.511	0.000
8. XYZ bank provides its services at the time it promises to do so	5.75	4.89	44.956	0.000
9. XYZ bank insists on error-free records	5.62	4.66	45.282	0.000
10. Employees of XYZ bank tell you exactly when services will be performed	5.59	4.84	29.562	0.000
11. Employees of XYZ bank give you prompt service	5.74	4.46	78.197	0.000
12. Employees of XYZ bank are always willing to help you	5.87	4.82	62.652	0.000
13. Employees of XYZ bank are never too busy to respond to your requests	5.40	4.10	75.752	0.000
14. The behaviour of employees of XYZ bank instils confidence in customers	5.94	4.78	62.372	0.000
15. You feel safe in your transactions with XYZ bank	6.07	4.90	66.667	0.000
16. Employees of XYZ bank are consistently courteous with you	6.02	4.82	90.743	0.000
17. Employees of XYZ bank have the knowledge to answer your questions	5.81	5.06	30.497	0.000
18. XYZ bank gives you individual attention	5.73	3.99	133.618	0.000
19- XYZ bank has operating hours convenient to all its customers	4.49	5.45	31.776	0.000
20. XYZ bank has employees who give you personal attention	5.58	3.91	132.401	0.000
21. XYZ bank has your best interests at heart	5.30	4.24	48.616	0.000
22. Employees of XYZ bank understand your specific needs	5.09	3.95	56.604	0.000

Table IV.
Canadian and Tunisian perceptions of service quality on an item basis

Canadian respondents recorded higher scores than their Tunisian counterparts on 21 of the 22 items. The only item on which Tunisian respondents recorded a higher score (5.45 vs 4.49; $F = 31.776; p = 0.000$) was item 19: ("XYZ bank has operating hours that are convenient to all its customers").

4.2 Importance of dimensions in predicting satisfaction and loyalty

To identify the service-quality dimensions that make the greatest contributions to satisfaction and loyalty, four linear regression analyses were conducted (two in each of the Canadian and Tunisian samples) with satisfaction and loyalty as the dependent variables and the five dimensions of service quality (tangibles, reliability, responsiveness, assurance, and empathy) as the independent variables.

Tables V and VI show the results for the Tunisian sample. For the first regression with overall satisfaction as the dependent variable (Table V), the adjusted R-square was 0.710, which indicates that the five SERVQUAL dimensions explained 71 percent of the variation in satisfaction. Of the five SERVQUAL dimensions, four showed a significant effect on satisfaction; in order of importance these were:

(1) "reliability" ($\beta = 0.269$);

(2) "responsiveness" ($\beta = 0.267$);

(3) "assurance" ($\beta = 0.225$); and

(4) "empathy" ($\beta = 0.138$).

In the second regression with loyalty as the dependent variable (Table VI), the adjusted R-square was 0.628, which indicates that the five SERVQUAL dimensions explained

	Unstandardized coefficients	Standard error	Standardized coefficients	t	Sig.
Constant	−0.555	0.262	_	−2.118	0.036
Tangibles	0.077	0.055	0.067	1.401	0.163
Reliability	0.309	0.092	0.269	3.351	0.001
Responsiveness	0.302	0.097	0.267	3.126	0.002
Assurance	0.241	0.077	0.225	3.149	0.002
Empathy	0.164	0.074	0.138	2.230	0.027

Notes: Adjusted R-square = 0.710; $F = 93.725$; Sig. = 0.000

Table V. Regression analysis with satisfaction as dependent variable (Tunisian sample)

	Unstandardized coefficients	Standard error	Standardized coefficients	t	Sig.
Constant	−1.623	0.364	_	−4.462	0.000
Tangibles	0.025	0.076	0.018	0.323	0.747
Reliability	0.351	0.128	0.253	2.748	0.007
Responsiveness	0.486	0.134	0.355	3.621	0.000
Assurance	0.131	0.106	0.101	1.232	0.220
Empathy	0.222	0.102	0.154	2.170	0.031

Notes: Adjusted R-square = 0.628; $F = 62.124$; Sig. = 0.000

Table VI. Regression analysis with loyalty as dependent variable (Tunisian sample)

62.8 percent of the variation in loyalty. Of the five SERVQUAL dimensions, three showed a significant effect on loyalty; in order of importance these were:

(1) "responsiveness" ($\beta = 0.355$);

(2) "reliability" ($\beta = 0.253$); and

(3) "empathy" ($\beta = 0.154$).

Tables VII and VIII show the results for the Canadian sample. For satisfaction (Table VII), the adjusted R square was 0.602, which indicates that the five SERVQUAL dimensions explained 60.2 percent of the variation in overall satisfaction. Four of the five SERVQUAL dimensions showed a significant effect on satisfaction; in order of importance, these were:

(1) "empathy" ($\beta = 0.312$);

(2) "reliability" ($\beta = 0.244$);

(3) "responsiveness" ($\beta = 0.192$); and

(4) "assurance" ($\beta = 0.139$).

For loyalty (Table VIII), the adjusted R-square was 0.653, which indicates that the five SERVQUAL dimensions explained 65.3 percent of the variation in loyalty. Two dimensions showed significant effects ($p < 0.05$) on loyalty. These were "empathy" ($\beta = 0.399$),followed by "reliability" ($\beta = 0.254$). The "responsiveness" dimension was significant only at the 0.09 level.

Table IX presents a summary of the results of all four regression analyses. It is apparent that the "tangibles" dimension was not a significant determinant of either

Table VII. Regression analysis with satisfaction as dependent variable (Canadian sample)

	Unstandardized coefficients	Standard error	Standardized coefficients	t	Sig.
Constant	−0.326	0.426	–	−0.765	0.445
Tangibles	0.000	0.075	0.000	−0.002	0.998
Reliability	0.327	0.088	0.244	3.735	0.000
Responsiveness	0.241	0.085	0.192	2.853	0.005
Assurance	0.191	0.096	0.139	1.992	0.048
Empathy	0.335	0.073	0.312	4.567	0.000

Notes: Adjusted R-square = 0.602; $F = 70.038$; Sig. = 0.000

Table VIII. Regression analysis with loyalty as dependent variable (Canadian sample)

	Unstandardized coefficients	Standard error	Standardized coefficients	t	Sig.
Constant	0.530	0.571	–	0.928	0.354
Tangibles	−0.011	0.100	−0.007	−0.106	0.916
Reliability	0.375	0.118	0.254	3.194	0.002
Responsiveness	0.193	0.113	0.139	1.705	0.090
Assurance	−0.110	0.128	−0.073	−0.860	0.391
Empathy	0.474	0.098	0.399	4.822	0.000

Notes: Adjusted R-square = 0.653; $F = 33.118$; Sig. = 0.000

	Tunisian sample				Canadian sample			
	Satisfaction		Loyalty		Satisfaction		Loyalty	
	Significance	Order of importance	Significance	Order of importance	Significance	Order of importance	Significance	Order of importance
Tangibles	NS		NS		NS		NS	
Reliability	S	1*	S	2*	S	2*	S	2*
Responsiveness	S	2*	S	1*	S	3*	S	3**
Assurance	S	3*	NS	S	4*	NS		
Empathy	S	4*	S	3*	S	1*	S	1*

Notes: $^{*}p < 0.05$; $^{**}p < 0.10$; S = Significant effect ($p < 0.05$); NS = Non-significant effect. The order of importance, with 1 is the most important

Table IX.
Summary of the results of the regression analyses

satisfaction or loyalty in either sample. In the Canadian sample, "empathy" was the most important predictor of both satisfaction and loyalty, followed by "reliability". In the Tunisian sample, "reliability" and "responsiveness" were the most important predictors of both satisfaction and loyalty. These results reflect clear differences between Canadians and Tunisians regarding the aspects of bank service that create satisfaction and loyalty.

5. Conclusions, limitations, and managerial implications

5.1 Major conclusions

The first objective of this study was to examine any differences between Canadians and Tunisians on perceptions of bank service quality. This is the first study to compare perceived service quality between Canadians and Tunisians. The study finds that, in general, both Canadian and Tunisian respondents perceived that bank service was high quality. Nevertheless, Canadian respondents reported significantly higher levels of perceived service quality than their Tunisian counterparts. This was so on all five of the SERVQUAL dimensions and on 21 of the 22 SERVQUAL items.

The second objective of the study was to identify which dimensions of service quality have the greatest influence on customer satisfaction and loyalty. The study finds that the "tangibles" dimension was of little consequence among Tunisian and Canadian bank customers, but there were differences between the two groups for the other dimensions. In the Canadian sample, "empathy" was the most important predictor of both satisfaction and loyalty, followed by "reliability". In the Tunisian sample, "reliability" and "responsiveness" were the most important predictors of satisfaction and loyalty. These results indicate that the preoccupations of banking customers are different in the two countries. The banking sector in Tunisia is at an earlier stage of development than it is in Canada. Tunisian bank customers therefore place more emphasis on basic aspects of service quality, such as "responsiveness" and "reliability" (that is, providing services as promised and free of error). In subsequent years, as the Tunisian banking sector matures, other dimensions of service quality (such as "empathy") will probably become more important. The same tendency was observed in China (Wang *et al.*, 2003).

The study results emphasize the importance of "reliability" (first or second in all four regression analyses) and "empathy" (first in both Canadian regression analyses), in accordance with the findings of Amin and Isa (2008). They report that "reliability" and "empathy" were the most important dimensions of service quality in Malaysian Islamic banks. The results also agree with the findings of Karapte *et al.* (2005), who find that "empathy" and "reliability" were the second- and third-most important determinants (after "interaction quality") of overall bank service quality in Northern Cyprus. The results support the finding of Dash *et al.* (2009) that Canadian bank customers attach high importance to reliability. Taken together, these findings emphasize the continuing importance of the employee in providing banking services. Despite technological automation and internet banking, customers apparently continue to value person-to-person contact (Molina *et al.*, 2007). Despite the changing banking environment, customers still assess bank service quality primarily in terms of the personal support they receive from employees, rather than technical innovations (Arasli *et al.*, 2005a). According to Molina *et al.* (2007), bank customers expect certain benefits if they are to maintain a long-term relationship with a particular bank. These benefits include first-rate service, personal recognition and friendly interactions, and a sense of confidence and trust. The findings of the present study, especially with respect to the Canadian sample of respondents, are in accordance with this view.

The results of this study support the claims of Malhotra *et al.* (2005) that perceptions of service quality vary by nationality due to differences in economic, social, and cultural environments. Researchers are encouraged to replicate this study in different countries. Considering the debate in the literature about the significance of using country or nationality as surrogate variables for culture (e.g. Craig and Douglas, 2006), researchers should examine these differences using a more elaborate conceptualization of culture (e.g. cultural values orientations). In addition, future research should consider globalization effects (e.g. Craig and Douglas, 2006) and how they accelerate the emergence of a "global consumer" (e.g. Cleveland and Laroche, 2007). Previous studies confirm the existence of homogeneous consumer segments, sharing similar needs and preferences that transcend countries. The global consumer in internet banking services may be a promising avenue of research.

5.2 Limitations

The most significant limitation of this study is the use of a convenience sample. The results may therefore not be representative of the perceptions of the whole population of bank customers in Canada and Tunisia. Future studies in this area could address this problem by using representative and larger samples. Future studies should be replicated in other countries, specifically those with different cultural, social and economic environments.

5.3 Managerial implications

The service sector now accounts for almost two thirds of the GDP in industrial countries and even in several developing countries. The banking sector has become intensively competitive due to globalization. Therefore, bank service managers need to understand how people in different countries rate service quality and what critical dimensions contribute to improving service quality.

Practitioners in both Canada and Tunisia can use the findings of this study to identify the dimensions of service quality that determine satisfaction and loyalty in their own country. Bank priorities vary depending on the origin of their customers. In Canada, empathy is clearly the most important dimension for predicting satisfaction and loyalty among customers. Canadian banks could realize a competitive advantage by emphasizing empathy in service delivery since Canadians expect their banks to:

- give them individual attention;
- have convenient operating hours;
- have their best interests at heart;
- employ staff who provides customers with personal attention; and
- employ staff who understand their specific needs.

Also, Canadian customers prefer human interactions when dealing with banks. These findings suggest that bank managers should implement customer-oriented strategies. Frontline employees should be motivated and trained to understand customer needs, personalize services, provide individual attention, and generally demonstrate caring behavior in all of their interpersonal dealings with customers.

In Tunisia, bank managers should emphasize the "reliability" and "responsiveness" dimensions of service quality, the most important predictors of satisfaction and loyalty among Tunisian customers. Banks should keep their promises to customers, show a sincere interest in solving client problems, inform users of the time required to perform transactions, perform the service right the first time, and insist on error-free records. Since "responsiveness" refers to the willingness to help customers and provide prompt service, frontline employees should be trained to give prompt service, show care and interest in helping customers, and respond appropriately to their requests. Employees should not neglect user questions because they are too busy.

In both countries bank managers should emphasize the important dimensions in their communication strategies. For example, Canadian advertising copy should stress the customer-employee interaction and highlight bank efforts to provide individual attention. In Tunisia, banks should emphasize the institution's reliability when dealing with customer assets and the willingness of employees to solve any problem customers may have. In fact, bank advertizements in both countries should use relevant cues to improve the effectiveness of their communications dollars. Since empathy and responsiveness are human dimensions of service quality, the bank should devote financial resources to training programs on these areas. The ability to be responsive and provide an empathetic service can be best developed through a comprehensive training program that encourages a culture of excellence in service delivery.

In terms of international marketing strategies in the banking sector, this study shows differences between Canadian and Tunisian consumers. Therefore, a common marketing strategy in these two countries (i.e. standardization) characterized by different economic, social and cultural environment, is not appropriate. This conclusion may apply in other contexts. This study focused only on perceptions but expectations may also vary by nationality. Bank management and employees should strive to find the underlying dimensions and levels of expectations and service performance in different countries. The SERVQUAL instrument could be used as a starting point for understanding expectations and perceptions of service.

With the development of electronic commerce, internet banking has become an alternative for developing, operating and offering bank services and products. The internet extends market coverage and offers banks the opportunity to increase their market share, reduce operation costs, and develop customer relationships. However, it poses serious challenges because internet users may have different demands, expectations, and needs from in-person customers. International banks operating on the internet should develop a personalized approach (acknowledging users by name, addressing personal e-mail, developing user friendly systems emphasizing the personal touch, having customers' best interests at heart, providing a customer feedback system, availability for help) when dealing with Canadian users, who value empathy highly. Banks should not completely automate their interactions with Canadian customers. When dealing with Tunisian customers, these banks should emphasize reliability (e.g. offering the service promised in an accurate and timely manner) and responsiveness (e.g. prompt responses to users' enquiries, quickly solving problems).

References

Aldlaigan, A.H. and Buttle, F.A. (2002), "SYSTRA-SQ: a new measure of bank service quality", *International Journal of Service Industry Management*, Vol. 13 No. 4, pp. 362-81.

Amin, M. and Isa, Z. (2008), "An examination of the relationship between service quality perception and customer satisfaction: a SEM approach towards Malaysian Islamic banking", *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 1 No. 3, pp. 191-209.

Angur, M.G., Nataraajan, R. and Jaheera, J.S. (1999), "Service quality in the banking industry: an assessment in a developing economy", *International Journal of Bank Marketing*, Vol. 13 No. 3, pp. 116-23.

Arasli, H., Katircioglu, S.T. and Mehtap-Smadi, S. (2005a), "A comparison of service quality in the banking industry", *International Journal of Bank Marketing*, Vol. 23 No. 7, pp. 508-26.

Arasli, H., Mehtap-Smadi, S. and Katircioglu, S.T. (2005b), "Customer service quality in the Greek Cypriot banking industry", *Managing Service Quality*, Vol. 15 No. 1, pp. 41-56.

Avkiran, N.K. (1994), "Developing an instrument to measure customer service quality in branch banking", *International Journal of Bank Marketing*, Vol. 12 No. 6, pp. 10-18.

Babakus, E. and Boller, G.W. (1992), "An empirical assessment of the SERVQUAL scale", *Journal of Business Research*, Vol. 24, pp. 253-68.

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, pp. 84-91.

Baldwin, A. and Sohal, A. (2003), "Service quality factors and outcomes in dental care", *Managing Service Quality*, Vol. 13 No. 1, pp. 207-16.

Baumann, C., Burton, S., Elliott, G. and Kehr, H.M. (2007), "Prediction of attitude and behavioural intentions in retail banking", *International Journal of Bank Marketing*, Vol. 25 No. 2, pp. 102-16.

Bei, L.T. and Chiao, Y.C. (2006), "The determinants of customer loyalty: an analysis of intangible factors in three service industries", *International Journal of Commerce and Management*, Vol. 16 Nos 3/4, pp. 162-77.

Bloemer, J.M., de Ruyter, K. and Peeters, P. (1998), "Investigating drivers of bank loyalty: the complex relationship between image, service quality and satisfaction", *International Journal of Bank Marketing*, Vol. 16 No. 7, pp. 276-86.

Boulding, W., Kalra, A., Staelin, R. and Zeithaml, V. (1993), "A dynamic process model of service quality: from expectations to behavioral intentions", *Journal of Marketing Research*, Vol. 30 No. 1, pp. 55-68.

Brady, M.K., Knight, G.A., Cronin, J.J., Tomas, G., Hult, M. and Keillor, B.D. (2005), "Removing the contextual lens: a multinational, multi-setting comparison of service evaluation models", *Journal of Retailing*, Vol. 81 No. 3, pp. 215-30.

Brown, T.J., Churchill, G.A. and Peter, J.P. (1993), "Research note: improving the measurement of service quality", *Journal of Retailing*, Vol. 69 No. 1, pp. 127-39.

Camarero, C. (2007), "Relationship orientation or service quality? What is the trigger of performance in financial and insurance services?", *International Journal of Bank Marketing*, Vol. 25 No. 6, pp. 406-26.

Carrilat, F.A., Jaramillo, F. and Mulki, J.P. (2007), "The validity of the SERVQUAL and SERVPERF scales: a meta-analytic view of 17 years of research across five continents", *International Journal of Service Industry Management*, Vol. 18 No. 5, pp. 472-90.

Chi Cui, C., Lewis, B.R. and Park, W. (2003), "Service quality measurement in the banking sector in South Korea", *International Journal of Bank Marketing*, Vol. 21 Nos 4/5, pp. 191-201.

Cleveland, M. and Laroche, M. (2007), "Acculturation to the global consumer culture: scale development and research paradigm", *Journal of Business Research*, Vol. 60, pp. 249-59.

Cook, C. and Thompson, B. (2001), "Psychometric properties of scores from the web-based LibQual+ study of perceptions of library service quality", *Library Trends*, Vol. 49 No. 4, pp. 585-604.

Craig, C.S. and Douglas, S.P. (2006), "Beyond national culture: implications of cultural dynamics for consumer research", *International Marketing Review*, Vol. 23 No. 3, pp. 322-42.

Cronin, J.J. and Taylor, S.A. (1992), "Measuring service quality: a re-examination and extension", *Journal of Marketing*, Vol. 56, July, pp. 55-68.

Cronin, J.J., Brady, M.K. and Hult, G.T.M. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments", *Journal of Retailing*, Vol. 76 No. 2, pp. 193-218.

Dash, S., Bruning, E. and Acharya, M. (2009), "The effect of power distance and individualism on service quality expectations in banking", *International Journal of Bank Marketing*, Vol. 27 No. 5, pp. 336-58.

Ehigie, B.O. (2006), "Correlates of customer loyalty to their bank: a case study in Nigeria", *International Journal of Bank Marketing*, Vol. 24 No. 7, pp. 494-508.

Fornell, C. (1992), "A national customer satisfaction barometer: the Swedish experience", *Journal of Marketing*, Vol. 56 No. 1, pp. 6-21.

Furrer, O., Liu, B. and Sudharshan, D. (2000), "The relationships between culture and service quality perceptions – basis for cross cultural market segmentation and resource allocation", *Journal of Service Research*, Vol. 2 No. 4, pp. 355-71.

Glaveli, N., Petridou, E., Liassides, C. and Spathis, C. (2006), "Bank service quality: evidence from five Balkan countries", *Managing Service Quality*, Vol. 16 No. 4, pp. 380-94.

Grönroos, C. (1984), "A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 18, pp. 36-44.

Guo, X., Duff, A. and Hair, M. (2008), "Service quality measurement in the Chinese corporate banking market", *International Journal of Bank Marketing*, Vol. 26 No. 5, pp. 305-27.

Hawke, A. and Heffernan, T. (2006), "Interpersonal liking in lender-customer relationships in the Australian banking sector", *International Journal of Bank Marketing*, Vol. 24 Nos 2/3, pp. 140-57.

Herbig, P. and Genestre, A. (1996), "An examination of the cross-cultural differences in service quality: an example of Mexico and the USA", *Journal of Consumer Marketing*, Vol. 13 No. 3, pp. 43-53.

Hofstede, G. (2001), *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations across Nations*, 2nd ed., Sage Publications, Thousand Oaks, CA.

Jabnoun, N. and Al-Tamimi, H.A.H. (2003), "Measuring perceived service quality at UAE commercial banks", *International Journal of Quality & Reliability Management*, Vol. 20 Nos 4/5, pp. 458-72.

Jiang, J.J., Klein, G. and Crampton, S.M. (2000), "A note on SERVQUAL reliability and validity in information system service quality measurement", *Decision Sciences*, Vol. 31 No. 3, pp. 725-44.

Johnston, R. (1995), "The determinants of service quality: satisfiers and dissatisfiers", *International Journal of Service Industry Management*, Vol. 6 No. 5, pp. 53-71.

Jun, M. and Cai, S. (2001), "The key determinants of internet banking service quality: a content analysis", *International Journal of Bank Marketing*, Vol. 19 No. 7, pp. 276-91.

Karatepe, O.M., Yavas, U. and Babakus, E. (2005), "Measuring service quality of banks: scale development and validation", *Journal of Retailing and Consumer Services*, Vol. 12, pp. 373-83.

Kassim, N.M. and Souiden, N. (2007), "Customer retention measurement in the UAE banking sector", *Journal of Financial Services Marketing*, Vol. 11 No. 3, pp. 217-28.

Kilbourne, W.E., Duffy, J.A., Duffy, M. and Giarchi, G. (2004), "The applicability of SERVQUAL in cross-national measurements of health-care quality", *Journal of Services Marketing*, Vol. 18 Nos 6/7, pp. 524-33.

Ladhari, R. (2009a), "A review of twenty years of SERVQUAL research", *International Journal of Quality and Services Sciences*, Vol. 1 No. 2, pp. 172-98.

Ladhari, R. (2009b), "Assessment of the psychometric properties of SERVQUAL in the Canadian banking industry", *Journal of Financial Services Marketing*, Vol. 14 No. 1, pp. 70-82.

Lai, J.-Y. (2006), "Assessment of employees' perceptions of service quality and satisfaction with e-business", *International Journal of Human-Computer Studies*, Vol. 64, pp. 926-38.

Lam, S.S.K. (1997), "SERVQUAL: a tool for measuring patients opinions of hospital service quality in Hong Kong", *Total Quality Management*, Vol. 8 No. 4, pp. 145-52.

Lam, T.K.P. (2002), "Making sense of SERVQUAL's dimensions to the Chinese customers in Macau", *Journal of Market-focused Management*, Vol. 5 No. 10, pp. 43-58.

Lee, M. and Ulgado, F.M. (1997), "Consumer evaluations of fast-food services: a cross-national comparison", *Journal of Services Marketing*, Vol. 11 No. 1, pp. 39-50.

Lewis, B.R. (1991), "Service quality: an international comparison of bank customers' expectations and perceptions", *Journal of Marketing Management*, Vol. 7, pp. 47-62.

Malhotra, N.K., Ulgado, F.M., Agarwal, J., Shainesh, G. and Wu, L. (2005), "Dimensions of service quality in developed and developing economies: multi-country cross-cultural comparisons", *International Marketing Review*, Vol. 22 No. 3, pp. 256-78.

Mels, G., Boshoff, C. and Deon, N. (1997), "The dimensions of service quality: the original European perspective revisited", *The Service Industries Journal*, Vol. 17 No. 1, pp. 173-89.

Molina, A., Martin-Consuegra, D. and Esteban, A. (2007), "Relational benefits and customer satisfaction in retail banking", *International Journal of Bank Marketing*, Vol. 25 No. 4, pp. 253-71.

Nam, S. (2008), "Service quality in retail banking", *The Journal of American Academy of Business*, Vol. 13 No. 2, pp. 223-30.

Nguyen, N. and Leblanc, G. (1998), "The mediating role of corporate image on customers' retention decisions: an investigation in financial services", *International Journal of Bank Marketing*, Vol. 16 No. 2, pp. 52-65.

Oliver, R.L. (1999), "Whence consumer loyalty", *Journal of Marketing*, Special Issue, pp. 33-44.

Organisation for Economic Co-operation and Development (OECD) (2008), *African Economic Outlook: Tunisia*, available at: www.oecd.org

Othman, A. and Owen, L. (2001), "Developing an instrument to measure customer service quality SQ in Islamic banking", *International Journal of Islamic Financial Services*, Vol. 3 No. 1, pp. 1-26.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, Vol. 49 No. 4, pp. 41-50.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-40.

Peter, J.P., Churchill, G.A. Jr and Brown, T.J. (1993), "Caution in the use of difference scores in consumer research", *Journal of Consumer Research*, Vol. 19, pp. 655-62.

Statistics Canada (2010), "Actual hours worked per week by industry", available at: www.statcan.gc.ca

Sultan, F. and Simpson, M. Jr (2000), "International service variants: airline passenger expectations and perceptions of service quality", *Journal of Services Marketing*, Vol. 14 No. 3, pp. 188-216.

Van der Wal, R.W.E., Pampallis, A. and Bond, C. (2002), "Service quality in a cellular telecommunications company: a South African experience", *Managing Service Quality*, Vol. 12 No. 5, pp. 323-35.

Voss, C.A., Roth, A.V., Rosenzweig, E.D., Blackmon, K. and Chase, R.B. (2004), "A tale of two countries' conservatism, service quality, and feedback on customer satisfaction", *Journal of Service Research*, Vol. 6 No. 3, pp. 212-30.

Wang, T., Lo, H.-P. and Hui, Y.V. (2003), "The antecedents of service quality and product quality and their influences on bank reputation: evidence from the banking industry in China", *Managing Service Quality*, Vol. 13 No. 1, pp. 72-83.

Winsted, K.F. (1997), "The service experience in two cultures: a behavioral perspective", *Journal of Retailing*, Vol. 73 No. 3, pp. 337-60.

Zhang, J., Beatty, S.E. and Walsh, G. (2008), "Review and future directions of cross-cultural consumer services research", *Journal of Business Research*, Vol. 61, pp. 211-24.

Zhou, L. (2004), "A dimension-specific analysis of performance-only measurement of service quality and satisfaction in China's retail banking", *Journal of Services Marketing*, Vol. 18 Nos 6/7, pp. 534-46.

Zhou, L., Zhang, Y. and Xu, J. (2002), "A critical assessment of SERVQUAL's applicability in the banking context of China", *Asia Pacific Advances in Consumer Research*, Vol. 5, Association for Consumer Research, Valdosta, GA, pp. 14-21.

Further reading

Bansal, H.S. and Voyer, P.A. (2000), "Word-of-mouth processes within a services purchase decision context", *Journal of Service Research*, Vol. 3 No. 2, pp. 166-77.

Çalik, N. and Balta, N.F. (2006), "Consumer satisfaction and loyalty derived from the perceived quality of individual banking services: a field study in Eskişehir from Turkey", *Journal of Financial Services Marketing*, Vol. 10 No. 4, pp. 135-49.

About the authors

Riadh Ladhari is an Associate Professor of Marketing at Laval University, Quebec, Canada. His current research is focused on services marketing, cross-cultural studies and e-commerce. His work has been published in journals such as *Psychology & Marketing*, *Journal of Business Research*, *Journal of Service Management*, *Journal of Financial Services Marketing*, *International Journal of Hospitality Management*, *Managing Service Quality*, *International Journal of Quality and Service Sciences* and *Journal of Retailing and Consumer Services*. Riadh Ladhari is the corresponding author and can be contacted at: riadh.ladhari@fsa.ulaval.ca

Ines Ladhari is a Doctoral student at the Higher Institute of Management of Sousse, Tunisia. Her research interests include bank efficiency and financial services quality.

Miguel Morales is an Assistant Professor of Marketing at Saint Mary's University in Halifax, Nova Scotia. His research is in the areas of service quality, cross-cultural service quality, cross-cultural consumer behaviour and international services marketing. He has an MBA from Escuela de Administración de Negocios para Graduados from ESAN in Lima, Peru; an MSc in marketing from Laval University in Quebec City, Canada, and a PhD from Laval University in Quebec City, Canada.

Modelling customer loyalty in financial services

A hybrid of formative and reflective constructs

Chris Baumann, Greg Elliott and Hamin Hamin
Department of Business, Macquarie University, Sydney, Australia

Received April 2010
Revised April 2010
Accepted August 2010

Abstract

Purpose – Customer loyalty is a focal concern for marketers who seek to identify its antecedents and causal structure with the aim of better understanding, predicting and managing loyalty. The purpose of this paper is to model both current behaviour (measured as share of wallet) and future intentions as measures of customer loyalty, to quantify the link between current and future behaviour.

Design/methodology/approach – A hybrid model, combining reflective and formative constructs, was developed, moving away from the traditional "reflective only" approach to explain customer loyalty. New predictors such as variety seeking, "resistance to change" and risk taking behaviour were tested to explain loyalty.

Findings – While "risk" is traditionally viewed as a key variable in financial services, this study finds that variety seeking and "resistance to change" predicted current behaviour and future behavioural intentions better than risk. Higher explanatory power and better model fit was found for a hybrid model combining formative and reflective constructs; in contrast to the more common fully reflective approach.

Research limitations/implications – This study adds to the emerging debate on whether concepts such as loyalty should be treated as reflective and/or formative. The implications from this study suggest that future research can usefully model current behaviour as formative and future intentions as reflective. Future research should test the extent that these findings apply across products and services beyond banking.

Originality/value – This study establishes that variety seeking and "resistance to change" can usefully explain and predict loyalty. The examination of "formative" and "reflective" concepts in explaining loyalty is also novel.

Keywords Banking, Customer loyalty, Risk management, Change management, Linear structure equation modelling, Modelling

Paper type Research paper

Introduction

The topic of customer loyalty is a focal concern for marketers who seek to identify its antecedents and causal structure with the aim of better understanding, predicting and managing loyalty. Previous loyalty research has heavily focused on the "satisfaction leads to loyalty" paradigm (e.g. Hallowell, 1996; Lee *et al.*, 2001), and has largely modelled loyalty as either future intentions or some form of current or past behaviour (Ewing, 2000; Johnson *et al.*, 2006). This study, however, moves away from the satisfaction-loyalty approach since the association has been shown to be relatively

An earlier version of this paper won a best paper award at the Academy of Marketing conference in Leeds, July 2009. The authors wish to acknowledge the reviewers and editor for their contribution to this paper.

International Journal of Bank Marketing
Vol. 29 No. 3, 2011
pp. 247-267

0265-2323
DOI 10.1108/02652321111117511

weak in the financial services context (Barnes, 1997; Krishnan *et al.*, 1999), and instead tests three new predictors to explain loyalty:

(1) variety seeking;

(2) resistance to change; and

(3) risk taking.

Also, this study models both current behaviour (measured as share of wallet) and future intentions as measures of customer loyalty, to quantify the link between current and future behaviour. Focusing on a customer's share of wallet (SOW) is important for bankers since it allows profiling of current customers who should be "protected" if they devote all their business to their bank, and those that hold the potential for growth because a significant proportion of their business is with another bank. By further examining and explaining a customer's future intentions, it offers the prospect of proactive management of relationships where customers are likely to defect.

In terms of methodology, this study also takes a new approach to modelling loyalty by testing and comparing "reflective" and "formative" constructs in structural equation modelling (SEM). The traditional approach to SEM is "reflective" modelling, but it has been suggested (Jarvis *et al.*, 2003; Petter *et al.*, 2007) that this approach is not suitable for all models, and this study sheds light on this complex discussion that is still in its infancy.

Antecedents of customer loyalty

While customer loyalty is a centrally important concept in marketing financial services, there is, as yet, little consensus as to the common predictors of loyalty and their potential interrelationships. Previous research in the field of customer loyalty has typically employed customer satisfaction, affective attitudes and service quality as predictors (Bloemer and De Ruyter, 1998; Bloemer *et al.*, 1998; Caruana, 2002; Zins, 2001). While there is little debate that customer satisfaction is logically and typically associated with customer loyalty, there is evidence suggesting that the association is not always strong. Jones and Sasser's (1995) landmark study establishes that satisfied customers do, on occasions, defect, for example if they find a better offer or want variety. Similarly, some satisfied customers switch banks when their personal circumstances change. Conversely, some loyal customers may not be particularly happy or satisfied, but remain loyal out of inertia. In an endeavour to shed further light on this question, this study explores several new factors not previously tested for their association with loyalty; namely, risk taking, variety seeking, and resistance to change. These variables were identified as potentially influential "behavioural predispositions", in contrast to the usual array of demographic and situational variables, and individual differences.

Consumer risk taking behaviour reflects the customer's attitude to the level of uncertainty and its impact on the consumer's buying decision (Gounaris and Stathakopoulos, 2004; Mitchell, 1999). In this sense, a consumer perceives risk as the weighted value of uncertainty concerning the unanticipated and undesirable consequences of a buying situation that might be avoided (Dholakia, 2001). The issue of "risk", also more specifically conceptualised as "risk taking behaviour" or its antonym "risk aversion", has not traditionally been a key focus in the marketing literature. However, risk has been investigated in economics (e.g. Bowman *et al.*, 1999;

Kahneman and Tversky, 1979; Rabin, 2000), international business (e.g. Fitzpatrick, 1983; Miller, 1992) and science (e.g. Atkinson, 1957; Tversky and Kahneman, 1974; Tversky and Kahneman, 1992). Risk has also been investigated in the area of finance (e.g. Jacoby and Skoufias, 1997; Jarrow and Turnbull, 1995; Long *et al.*, 1990; Sharpe, 1964) where risk is a major factor in investment decisions. In marketing, risk has been researched in relation to consumer behaviour (Taylor, 1974), branding (Peter and Ryan, 1976) and, more generically, to the entire marketing discipline (Stone and Gronhaug, 1993). Specifically, previous research has examined the correlation between risk behaviour or risk perception and the degree of consumer involvement in a product category (Dholakia, 2001; Howcroft *et al.*, 2007). It has been found that the level of risk aversion is positively associated with the level of product involvement. Logically, higher levels of risk taking are also expected to be inversely related to loyalty. With the frequently large sums of money tied up in a banking relationship and in periods of economic uncertainty, punctuated by incidents of bank failures, it is expected that risk aversion could be an influential factor in bank loyalty.

Gounaris and Stathakopoulos (2004) found that, not only the consideration of risk is associated with brand loyalty, but also variety seeking. Variety seeking has been researched in the field of marketing in various ways, namely among goods and services (Kahn, 1995), among enjoyable products (Kahn and Isen, 1993), in relation to purchase quantity and timing (Simonson, 1990), brand switching (Givon, 1984), inexplicable and explicable behaviour (McAlister and Pessemier, 1982), private versus public consumption (Ratner and Kahn, 2002) and more general marketing models (Maimaran and Wheeler, 2008; McAlister, 1982). Variety seeking is one of the essential consumer characteristics driving consumers to break with routinisation of their buying behaviour (Choi *et al.*, 2006; Foxall, 1993; Goukens *et al.*, 2007; Kahn and Isen, 1993; Kahn *et al.*, 1986; Menon and Kahn, 1995; Roehm and Roehm, 2005; Trivedi and Morgan, 2003). Consumers tend to seek variety in their buying behaviour when there is an intrinsic need or a level of consumer involvement in a product category (Roehm and Roehm, 2005; Trijp *et al.*, 1996). Variety seeking will potentially lead to increases in customer satisfaction and to decreases in levels of loyalty (Gounaris and Stathakopoulos, 2004; Homburg and Giering, 2001). Most past studies have looked at the effects of "variety seeking" on customer loyalty in the purchase of enjoyable or consumer products (Trivedi and Morgan, 2003). This study extends the investigation of the association between variety seeking and loyalty to the more prosaic category of retail banking, although it is expected that variety seeking may still prove a significant influence on loyalty – at least for certain groups of bank customers.

In contrast to the concept of variety seeking, the study of "resistance to change" (N'goala, 2007; Nevin and Grace, 2000; Panerai, 1998; Stauss *et al.*, 2005) in customer loyalty is more limited. Resistance to change has been investigated generically in behavioural science (Dent and Goldberg, 1999), sociology (Kelley and Volkart, 1952), management (Diamond, 1986; Val *et al.*, 2003; Waddell and Sohal, 1998) and organisational change (Aladwani, 2001; Coch and French, 1948; Lawrence, 1986; Piderit, 2000). In marketing, resistance to change has been researched in terms of internal marketing (Varey, 1995), international marketing (Darling and Taylor, 1989) and internet banking (Sathye, 1999). This study deliberately examined "resistance to change", and not "switching barriers", as a predictor of customer loyalty. Resistance to change can be defined as a customer's willingness to stay with an organisation regardless of pleasant or unpleasant experience (Pritchard *et al.*, 1999). Taylor *et al.* (2004, p. 219) stated that "resistance to change is the root tendency of commitment as well as the primary evidence of commitment" (Taylor *et al.*, 2004). Resistance to change is a key antecedent of, and is positively related to, loyalty (Pritchard *et al.*, 1999; Taylor *et al.*, 2004). In this sense, resistance to change, like variety seeking and risk taking, can be regarded as an internal behavioural predisposition. This contrasts with "switching barriers" which have been identified in the loyalty literature, but which can be more strictly regarded as an external, structural influence on loyalty.

Construct and measurement of loyalty in financial services

Customer loyalty can be expressed in a variety of terms, although fundamentally it can be measured by either (or both) behavioural and attitudinal elements (Day, 1969; Grisaffe, 2001; Russell-Bennett *et al.*, 2007). These two elements of loyalty are arguably constructed in the model development of this study as current behaviour and future intentions (in the sense that behavioural intentions are commonly conceived as a component of attitudes). Current behaviour is conceptualised as "share of wallet" (SOW), and future intentions as the likelihood of switching. Share of wallet has previously been identified as an important measurement of (behavioural) loyalty in services (Bank Systems + Technology, 1996; Baumann *et al.*, 2005; Baumann, Burton and Elliott, 2007a; Cooil *et al.*, 2007; Foscht *et al.*, 2009; Keiningham *et al.*, 2003; Perkins-Munn *et al.*, 2005; Rust *et al.*, 2000; Wirtz *et al.*, 2007). SOW captures the percentage of overall business a customer assigns to one service provider such as their main bank and naturally higher levels of SOW reflect higher levels of customer loyalty. In this study the SOW dimension is constructed in terms of a customer's assets held with the bank in combination with their borrowings from the main bank.

Future intentions have also been the focus of previous loyalty research (Baumann, Burton, Elliott and Kehr, 2007b; Ewing, 2000; Murray and Howat, 2002; Newberry *et al.*, 2003). A customer's future intentions measure whether they plan to remain a customer in the future, in contrast to SOW that captures a customer's current (loyalty) behaviour. In this study future intentions are constructed as a customer's intentions to seek a new bank, or at least a new product from a competing bank, within the next half year; and whether they plan to close an account in the short- or long-term (i.e. half-year or next five years respectively). Reichheld (2003) argued that a customer's intentions are equally important for a company to investigate as current behaviour, and this study measures both, although the measurements, based on the nature of the variables, differ. For current behaviour, SOW was measured in percentages of a customer's overall business, whereas for future intentions a classic seven-point Likert-scale was applied.

The predictors of customer loyalty tested in this study were risk (i.e. willingness to take risks), resistance to change and variety seeking. Risk was measured by whether a customer would stay with their main bank, even against competing forces, or when the bank itself makes a major mistake, while variety seeking was described as a function of the extent to which a respondent seeks thrills, variety, enjoying "new things" and enjoys meeting new people. Traditionally, all variables explained above would be modelled as "reflective", but in this study, variety seeking and also current behaviour were tested as formative constructs since these decisions are impacted by one's environment rather than based on one's reflection.

Modelling loyalty using structural equation modelling

The use of structural equation modelling (SEM) in studies of loyalty is, by now, not uncommon (Chiou, 2004; Chiu *et al.*, 2005; Grapentine, 2000; Johnson *et al.*, 2008; Ping, 1993; Sanchez-Perez and Iniesta-Bonillo, 2004b; Yoon and Uysal, 2005). Structural equation modelling (SEM) can assume two contrasting types of measurements: reflective or formative constructs. Traditionally, reflective measurement has been applied in causal models in which the observed variables are chosen and measured as they are assumed to be reflective of the prior theoretical latent construct (a process of deductive reasoning). Recently however, formative measurements, in which the meaning of latent constructs is inferred from the configuration of the observed variables (a process of inductive reasoning) have been advocated for SEM.

Jarvis *et al.* (2003) show the distinguishing characteristics of the contrasting approaches. In simple terms, the issue revolves around the primacy of theory or data. If the focus of the model is in empirically verifying an a priori theoretical variable or model, then a reflective model or variable is appropriate. Conversely, if the research objective is to identify a theoretical model or variable which best fits the empirical data or observations, then a formative approach is warranted.

Formative SEM research is still in its early stage, and the focus of this current study is to compare the process and outcomes of purely reflective structural equation modelling and combined reflective and formative equation modelling. Table I provides an overview of the distinctions that have been drawn between reflective and formative constructs in the literature. Theoretical arguments have been advanced to shift the focus and approach from reflective to formative SEM (Diamantopoulos, 1999; Diamantopoulos *et al.*, 2008; Diamantopoulos and Winklhofer, 2001; Edwards and Bagozzi, 2000; Howell *et al.*, 2007) because not all constructs in SEM are "forward oriented" (i.e. reflective), but in many cases "backward oriented" and thus formative (Wilcox *et al.*, 2008). Formative models and variables or constructs are generally based

Reflective	Formative	References
Effect indicator (Effect indicators are the more typical type of indicators that depend on the latent variable)	Causal indicator (Cause indicators are ones in which the indicator affects the latent variable)	Howell *et al.* (2007), Bollen (2007)
Indicators are manifestations of the construct	Indicators are defining characteristics of the construct	Jarvis *et al.* (2003)
Instructions forward oriented (judgment based on hypothetical actions)	Instructions backward oriented (judgment based on actual actions)	Wilcox *et al.* (2008)
Latent construct exists independent of the measures used	Latent constructs is a combination of its indicators	Borsboom *et al.* (2003, 2004) cited in Coltman *et al.* (2008)
A process of deductive reasoning	A process of inductive reasoning	Baumann, Elliott, and Hamin

Table I.
Natures of reflective and formative constructs

on "actual actions" (observations), while reflective modelling is based on hypothetical (theoretical) actions (Wilcox *et al.*, 2008).

To date, the vast majority of published SEM studies are based on reflective models. In contrast, only a few empirical studies in SEM using formative measurement have been conducted in marketing (Jarvis *et al.*, 2003); including in the field of relationship value (Ulaga and Eggert, 2006), retailer equity (Arnett *et al.*, 2003) and service orientation (Homburg *et al.*, 2002). Several authors have advocated applying formative measurement when reflective indicators do not provide adequate results (Diamantopoulos, 2008; Diamantopoulos *et al.*, 2008; Diamantopoulos and Winklhofer, 2001; Rossiter, 2002; Wilcox *et al.*, 2008). Diamantopoulos (2010), Jarvis *et al.* (2003) and Podsakoff *et al.* (2006), for example, showed that misspecification of measurement models often occurs when reflective measurement is employed instead of formative measurement.

In loyalty research, where some dimensions are of a psychometric nature (e.g. satisfaction, attitude, perception of service quality), it has been argued that SEM should be formative or reflective (Marakas *et al.*, 2007; Marakas *et al.*, 2008) or solely reflective (Diamantopoulos and Winklhofer, 2001; Hardin *et al.*, 2007; Hardin *et al.*, 2008). Previous marketing and business research has overwhelmingly employed traditional reflective measurement practice (Edwards and Bagozzi, 2000) in SEM's. According to Jarvis *et al.* (2003), some 96 per cent of SEM studies published in leading journals used reflective measures; while only 4 per cent used formative measures. Perhaps more alarmingly, they claim that 28 per cent of the reflective models should more correctly have used formative measures.

Theoretical and empirical considerations in identifying SEM constructs

Generally, determining whether structural equation modelling should assume reflective or formative measurement depends on four considerations, (Bollen and Lennox, 1991; Coltman *et al.*, 2008; Edwards and Bagozzi, 2000; Jarvis *et al.*, 2003) namely:

(1) the nature of the construct;

(2) the relationships among the observed indicators;

(3) the direction of causality between the construct and indicators; and

(4) a theoretical judgment (Jarvis *et al.*, 2003; Wilcox *et al.*, 2008).

Similar to Wilcox *et al.* and Jarvis *et al*'s. suggestion, Coltman *et al.* (2008) proposed a two-step justification to define measurement constructs; namely, theoretical and empirical justification.

Theoretical justification is needed to define the nature of the construct, the direction of causality, and the items used to measure constructs. As a generalisation, for current behaviour, measured as share of wallet, formative measurements appear better suited, and for future intentions, reflective measurements have been applied in this study. In the current study, two constructs "variety seeking" and "current behaviour" can be appropriately considered as formative constructs. In this way, observed indicators forming the constructs of variety seeking and current behaviour are considered to reflect past, and thus observable, behaviour. For example, variety seeking is manifested by observed indicators of "seeking out thrills and excitement", "liking variety", "trying new things", and "meeting people who have new ideas". These observed indicators demonstrate bank customers' propensity to seek various experiences during their shopping (and banking) activities. The latent construct of current behaviour is similarly structured around indicators with the same rationale as that of variety seeking (i.e. share of wallet in terms of assets and debts). In other words, the observed indicators of both latent constructs show "actual actions" (Wilcox *et al.*, 2008) of bank customers. In contrast, future intentions cannot be observed, but only hypothesised. Therefore, "forward looking" variables such as future intentions to remain a customer, risk taking behaviour and resistance to change were treated as reflective constructs.

Coltman *et al.* (2008) also suggested assessing empirical justification as a second step, following theoretical justification, to assess the suitability of using reflective or formative constructs. Empirical justification involves testing for indicator intercorrelation, the relationships of indicators with their antecedents and consequences, measurement error and collinearity in order to detect the causal direction between constructs and their indicators (Coltman *et al.*, 2008). Testing for indicator interrelation of all constructs has been conducted in this study. The results show the intercorrelation for all indicators have similar positive signs and significance levels of relationships. The Cronbach alphas, testing the indicator relationships, revealed weak to moderate positive intercorrelation for variety seeking and current behaviour, and strong and positive intercorrelation for resistance to change and future intentions. The third set of testing, as part of the empirical determination of the nature of the constructs in SEM, is the measurement error and collinearity test. The vanishing tetrad test with fewer than four indicators per latent variable was conducted for each construct following Ting (1998); Bollen and Ting (2000) and Hipp *et al.* (2005). The results are presented in Table II.

Table II shows clear results for current behaviour (formative since $p < 0.05$) and future intentions, risk and resistance to change (reflective since $p > 0.05$). For variety seeking, a trend towards formative was found ($p = 0.079$), and the later structural equation model testing revealed better model fit for variety seeking as formative, supporting the conceptual view that the construct is of a formative nature. A Confirmatory Tetrad Analysis applying CTA-SAS developed by Ting (1998) was conducted for all variables, offering further support for the above decisions. The Tetrad test results shown in Table II, in combination with the indicator intercorrelation and indicator relationship testing, reject the reflective model for two of the five constructs. In particular, current behaviour and variety seeking were determined to be formative based on the Tetrad test, whereas for future intentions, risk and resistance to

Constructs	Number of indicators	χ^2/df	df	p-value	Implication
Current behaviour (SOW)	2[a]	18.44	2	< 0.001	Formative
Variety seeking	4	2.656	2	0.079	Formative
Future intentions	4	2.010	2	0.134	Reflective
Risk	1[a]	0.741	2	0.477	Reflective
Resistance to change	2[a]	0.017	1	0.897	Reflective

Note: [a]Following Ting (1998) as well as Bollen and Ting (2000) these tests include additional unrelated indictors since there are less than four predictors

Table II.
Tetrad test results for SEM constructs

change source sharing, the test did not reject the reflective model. The Confirmatory Tetrad Analysis for "variety seeking" is presented in Appendix 1 as an example.

The current study

Consumer behaviour and attitudes to banks and banking relationships were examined in a postal survey of Australian banking customers, the final usable sample size of which comprises 1,025 responses. For the purposes of this paper, the aim of the study was to explore the attitudinal predictors of bank loyalty. In this context, respondents provided their views on risk taking behaviour, variety seeking, their resistance to change and future banking intentions, typically in seven-point Likert scales. For their actual banking behaviour, respondents disclosed their allocation of savings/investments and debts/loans towards their main bank in percentages, i.e. share of wallet (SOW). SOW was measured separately for assets such as savings accounts, shares and bonds, as well for debts/loans such as car and home loans. "Future intentions" was measured by a factor score of a customer's intention to remain with their main bank, both short (six months) – and long-term (five years). In this context, SOW reflects a customer's current behaviour, while "future intentions" reflects their intentions to remain loyal. Both dimensions are commonly used in loyalty research with a strong focus on intentions rather than actual current behaviour, but rarely are they combined in one model, as is the case in this research.

Testing reflective and formative models of customer loyalty

The same data were used to test, first, two alternative models based on the constructs all treated as reflective, and, subsequently, the combined "hybrid" models that contain both reflective and formative constructs. This traditional structural model, using exclusively reflective constructs, is presented in Figure 1.

The full reflective approach, Figure 1, resulted in mis-specification of the model with unacceptable goodness of fit. In particular, estimation of this model revealed a high chi-square value, $\chi^2 = 1034.829$, p-value < 0.001 and value of ratio χ^2 to degree-of-freedom (χ^2/df) of 8.482. The value of ratio χ^2 to degree of freedom falls

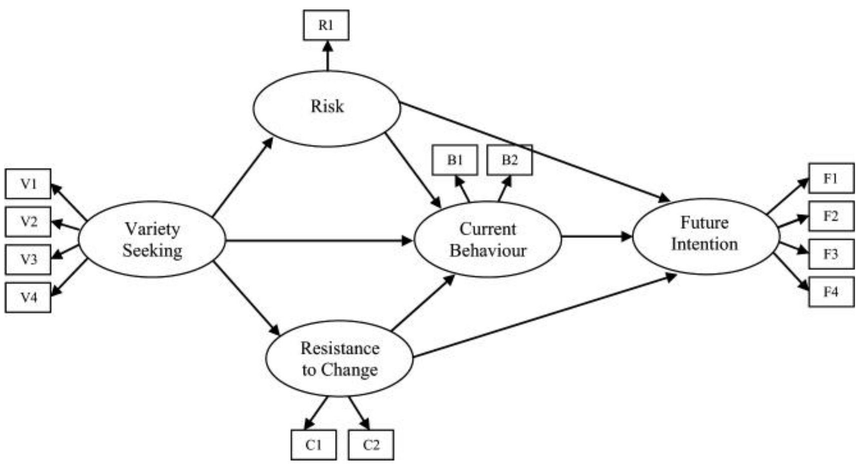


Figure 1.
Full reflective model

outside the acceptable range of less than 5.0 (Bollen, 1989), or less than 3.0 which is preferred (Byrne, 1998). Although the goodness of fit indices are more than 0.90, the value for the root mean square error of approximation (RMSEA = 0.073) falls slightly outside the acceptable range of 0.05 or less. In addition, NFI and CFI are also lower than the acceptable range of 0.95 or better (Hair *et al.*, 1998; Jarvis *et al.*, 2003). Based on the results of the estimation of fit indices, the full reflective model did not provide acceptable fit between the data and the theoretical model. Following Jarvis *et al.*'s (2003) and Petter *et al.*'s (2007) call to more critically assess SEM's based on reflective and formative constructs, a combined hybrid model was proposed and tested. The hybrid model is illustrated in Figure 2.

In this paper, the term "hybrid model" is introduced to signify a model that contains both reflective and formative measurements. Others have used the term "multiple indicator multiple cause" (MIMIC) (Sanchez-Perez and Iniesta-Bonillo, 2004a; Wilcox *et al.*, 2008), but MIMIC has been used for combined reflective and formative indicators in one single latent construct as well as for structural models with both reflective and formative measurements. The introduction of the new "hybrid" model term allows a clearer distinction between reflective and formative models (the hybrid model); as opposed to reflective and formative constructs (MIMIC).

Development of the most parsimonious hybrid model

Based on the finding that the full reflective model (presented in Figure 1) did not reveal acceptable model fit, hybrid models of reflective and formative constructs were tested. Table III provides an overview of the model fit indices and explanatory powers, starting with the initial "full reflective model", followed by the "hybrid" models A to C with gradually improving model fits. Therefore, the full reflective model (Figure 1) has neither theoretical nor empirical merits for further empirical testing by SEM. In the succeeding development of measurement scales the constructs "variety seeking" and "current behaviour" were both operationalised using formative measures/indicators. The tetrad test (Table II) empirically supports these formative measures. However, the purpose of the model evolution approach in this study is designed to show the evolution model quality, and thus started with the full reflective model nonetheless. The evolution of successively better fitting models is shown in Table III.

For the first hybrid model A, compared with the initial fully reflective model, variety seeking and current behaviour were changed to formative constructs, whereas risk, resistance to change and future intentions remained reflective constructs. The fit

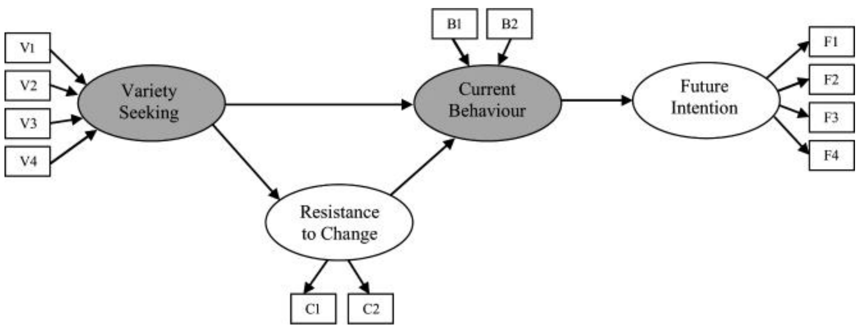


Figure 2.
Hybrid model

Table III.
Evolution of model fit indices and explanatory power

	Full reflective model		Hybrid model A		Hybrid model B		Hybrid model C	
	n	*p*	*n*	*p*	*n*	*p*	*n*	*p*
Fit indices								
Chi-squared χ^2	730.69		214.82		69.16		61.06	
Degrees of freedom (df)	61		56		45		35	
χ^2/df	11.98		3.836		1.54		1.75	
p value	0.000		0.000		0.012		0.004	
Comparative fit index (CFI)	0.849		0.964		0.994		0.993	
Bentler-Bonett normed fit index (NFI)	0.838		0.952		0.982		0.983	
Goodness of fit index (GFI)	0.912		0.969		0.989		0.989	
Root mean squared error of approximation (RMSEA)	0.104		0.053		0.023		0.027	
R-squared current behaviour	0.029		0.997		0.997		0.997	
R-squared future intention	0.328		0.574		0.499		0.500	
Coefficients								
Variety seeking → risk	0.687	< 0.001	0.784	< 0.001	0.784	< 0.001		
Risk → current behaviour	−0.155	0.154	−0.037	0.720	−0.020	0.860		
Variety seeking → resistance to change	−0.030	0.298	−0.067	0.084	−0.067	0.077	−0.075	0.069
Resistance to change → current behaviour	0.122	< 0.001	0.994	0.009	0.994	0.018	0.994	0.018
Variety seeking → current behaviour	0.076	0.381	0.080	0.427	0.072	0.518	0.092	0.129
Current behaviour → future intention	0.081	0.021	0.758	0.009	0.706	0.017	0.707	0.017
Risk → future intention	0.014	0.701						
Resistance to change → future intention	0.558	< 0.001						

indices for hybrid model A were substantially improved over those of the full reflective model, although the value of $\chi^2 = 214.818$ is considered high since p-value is less than 0.001, but the values of other important fit indices such $\chi^2/\mathrm{df} = 3.836$, GFI = 0.969, NFI = 0.952, CFI = 0.964, and RMSEA = 0.053 fall inside the recommended threshold values. The relatively high chi-square is likely a result of the large sample size, although this is typically viewed favourably for representative empirical studies.

In order to improve the model's fit to the data, for hybrid model B, future intentions were modified to solely measure a customer's short-term intentions, i.e. within the next six months, and excluding their long-term view (five years). Conceptually, it seems logical that the two different timelines should not necessarily be reflected in one single variable. Further, and arguably more importantly, from a practitioner's perspective, short-term intentions supersede long-term intentions since the former are more likely to reliably predict actual behaviour, whereas the latter is arguably less likely to result in actual switching. In reviewing the goodness-of-fit statistics for hybrid model B (shown in Table III), the various fit indices for the model include $\chi^2 = 69.157$, which is considered low, and thus acceptable. A p-value of 0.012 also suggests a good model fit, in line with other important fit indices such $\chi^2/\mathrm{df} = 1.537$, GFI = 0.989, NFI = 0.982, CFI = 0.994, and RMSEA = 0.023. In conclusion, the model fit for hybrid model B falls well inside the recommended threshold values. However, while fit measures were satisfactory, it was found that the association between a customer's risk taking behaviour and their current and future banking behaviour is not significant, and thus, in order to arrive at a more parsimonious model, the variable "risk" was removed for the final hybrid model C.

The model fit indices for hybrid model C are all very acceptable values, although slightly lower than for hybrid model B. As shown in Table III, the Chi-Squared is $\chi^2 = 61.058$ with a p-value of 0.004, $\chi^2/\mathrm{df} = 1.745$, GFI = 0.989, NFI = 0.983, CFI = 0.993, and RMSEA = 0.027. While the model fit for hybrid model C is thus marginally lower than for hybrid model B, it is the most parsimonious of all models developed in this study and, as such, of most value to practitioners who aim to explain loyalty with as few variables as possible.

While the model fit indices during the model evolution improved from the full reflective model to the hybrid models A and B (model C was no longer an improvement of model fit, but was the most parsimonious model), the explanatory power for current behaviour (i.e. SOW) and for future intention also dramatically improved from the full reflective model to the hybrid models. The full reflective model explained only 3 per cent (R-squared 0.029) of current behaviour, while the hybrid models A to C each explained a remarkable, and admittedly somewhat unrealistic, 99.7 per cent (R-squared 0.997). In terms of future intentions, the full reflective model explained 33 per cent (R-squared 0.328), hybrid model A explained 57 per cent (R-squared 0.574) and hybrid models B and C each 50 per cent (R-squared 0.499 for model B; 0.500 for model C).

An examination of the coefficients in Table III; starting with model B given its superior model fit compared to model A) shows that variety seeking explains both risk taking behaviour ($\beta = 0.784$; $p < 0.001$) and resistance to change ($\beta = -0.067$; $p = 0.077$), but risk taking behaviour itself was not significantly associated with current behaviour ($\beta = -0.020$; $p = 0.860$). Consequently, "risk" was excluded from the model in order to obtain the most parsimonious model, resulting in hybrid model C. In hybrid model C, variety seeking explains resistance to change ($\beta = 0.075$; $p = 0.069$), and in turn resistance to change explains current behaviour ($\beta = 0.994$; $p = 0.018$). Future intentions are predicted by current behaviour ($\beta = 0.707$; $p = 0.017$).

The above coefficient of 0.994 (which is approaching 1.00) for the path from resistance to change to current behaviour is exceptionally high, and is also in line with an adjusted R-squared of 0.997, suggesting that 99.7 per cent of current behaviour is explained by variety seeking and resistance to change. Such a constellation appears problematic from both empirical and theoretical perspectives.

Empirically, if these two constructs are highly correlated, discriminant validity should be proven. Appendix 2 shows that the four measures of variety seeking and the two measures of resistance to change are not related. The discriminant validity test revealed that the measures between the measures of the two construct are very low and that the two sets of measures each are related to different constructs, and as such discriminated from each other.

Theoretically, if resistance to change (i.e. a personality-related construct) has such an extremely high explanatory power, then what is the role of a service provider‘s marketing effort to satisfy the customer? Retail banking customers typically have their debts/loans arranged with their bank with a long-term perspective, e.g. their mortgages are often "locked in" for a number of years. In addition, customers have arrangements to have salary income directly transferred into a bank account and often have regular savings plans, and this scenario also conceptually supports the finding of this study that "resistance to change" therefore is strongly associated with a customer's loyalty level such as share of wallet. Variety seeking is often a factor in consumer choice for fast moving consumer goods (FMCG) and is also potentially a factor in financial services where banks and products may have been positioned in similar ways to FMCG. In contrast, this study finds that besides these repositioning attempts by banks, consumer behaviour is only marginally influenced by variety seeking in banking. In line with the empirical findings of this study of an insignificant link ($\beta = 0.092$; $p = 0.129$) between variety seeking and current behaviour, but a strong and statistically significant link ($\beta = 0.994$; $p = 0.018$) between resistance to change and current behaviour, this study lends support to the debate in the literature questioning the classic satisfaction to loyalty link. The high coefficients in this study (0.994 and 0.707) reflect the key associations in the tested model and suggest, in conclusion, that customer loyalty is explained by variety seeking, mediated by resistance to change. This study provides empirical support for a paradigm shift away from testing satisfaction as the key predictor of loyalty. Results of this study point to the importance of "inertia" as a key driver of loyalty in that this study establishes resistance to change as a strong explanator of customer loyalty.

Discussion and conclusion

The objectives of this study were to explore the concept of customer loyalty and its causal antecedents using both formative and reflective measurements in SEM. This study adds to the customer loyalty literature since new predictors have been tested: namely, variety seeking, resistance to change and risk taking behaviour (details of the estimates and p values are shown in Table III). Variety seeking is significantly associated with current behaviour, measured as share of wallet, via resistance to change, and current behaviour was significantly associated with future intentions (as measured in intentions to remain a customer). High explanatory power was found in this study in explaining, and thus predicting, loyalty. Adjusted R-squares suggest that 99.7 per cent of current behaviour, and 50 per cent of future intentions can be explained (see hybrid model C).

A further notable finding is that, contrary to expectations, risk-taking, while statistically only significantly associated with variety seeking, was not an important predictor of loyalty in financial services and thus a more parsimonious model of loyalty could be generated excluding "risk". This may be a surprising result to bankers who may believe that risk is always a fundamental consideration in banking and investment decisions. On reflection, however, two possible explanations are worthy of mention. First, banking is often oligopolistic in Western markets, in Australia, dominated, for example, by four major banks. Customers have long conducted their banking believing that there are few, if any, significant differences between these banks and certainly nothing between them as regards risk and security. Consequently, risk, while theoretically important, is not salient in their choice of banks, as all are equally secure. Thus, considerations of risk will not figure prominently in banking customers' choice processes. Second, it should be noted that these data were collected before the onset of the global financial crisis (GFC) in which even major global banks were shown to have questionable balance sheets, which almost certainly would have changed banking customers' views of risk and security. Notwithstanding the GFC, the Australian banks have displayed remarkable resiliency, due in part to their conservative balance sheets, close regulatory oversight, and their modest exposure to the US sub-prime markets. At the same time, the Australian Government subsequently guaranteed the deposits of the major banks, which has arguably given the banks a substantial "free kick" at the expense of their smaller, non-guaranteed competitors.

A secondary outcome of this research has been to examine the utility of the two typical approaches to constructing SEMs. Several models, based on these competing approaches, are compared based on the identical sample, thus, allowing for an investigation of the effects of the different modelling approaches. It was found that for customer loyalty, a combined SEM model employing both reflective and formative measurements was superior to a purely reflective model. This finding is in line with a call (Coltman *et al.*, 2008; Diamantopoulos and Siguaw, 2006; Diamantopoulos *et al.*, 2008), thus far predominantly on theoretical rather than empirical grounds, to deviate from the standard reflective modelling practice, and to more carefully examine the true nature of observed and latent constructs. This study provides empirical evidence in support of previous conceptual papers, which propose the use of formative measurement models as an alternative to mis-specification in structural models employing reflective constructs (Diamantopoulos, 1999; Diamantopoulos *et al.*, 2008; Rossiter, 2007). This empirical finding is also consistent with the view that SEM should give greater weight to studies which seek to fit structural models to the observed empirical data; rather than to continue the overwhelming pre-occupation of marketing academics with finding data to support frequently naïve or self-evident theoretical models. This study provides some evidence that the investigation of "behavioural predispositions", in addition to the usual "service profit chain" (Heskett, 2002; Heskett *et al.*, 1997) and demographic variables, using a "hybrid" reflective and formative model can reveal worthwhile additional insights into the drivers of bank customer loyalty. At the same time, the use of formative and hybrid models offers the prospect of improved SEM results over models based on the traditional reflective approach.

References

Aladwani, A.M. (2001), "Change management strategies for successful ERP implementation", *Business Process Management Journal*, Vol. 7 No. 3, pp. 266-75.

Arnett, D.B., Laverie, D.A. and Meiers, A. (2003), "Developing parsimonious retailer equity indexes using partial least squares analysis: a method and applications", *Journal of Retailing*, Vol. 79 No. 3, pp. 161-70.

Atkinson, J. (1957), "Motivational determinants of risk-taking behavior", *Psychological Review*, Vol. 64 No. 1, pp. 359-72.

Bank Systems + Technology (1996), *Focus Must Shift to Gaining Share of Wallet*, Bank Systems + Technology.

Barnes, J.G. (1997), "Closeness, strength, and satisfaction: examining the nature of relationships between providers of financial services and their retail customers", *Psychology & Marketing*, Vol. 14 No. 8, pp. 765-90.

Baumann, C., Burton, S. and Elliott, G. (2005), "Determinants of customer loyalty and share of wallet in retail banking", *Journal of Financial Services Marketing*, Vol. 9 No. 3, pp. 231-48.

Baumann, C., Burton, S. and Elliott, G. (2007a), "Predicting consumer behavior in retail banking", *Journal of Business & Management*, Vol. 13 No. 1, pp. 79-96.

Baumann, C., Burton, S., Elliott, G. and Kehr, H.M. (2007b), "Prediction of attitude and behavioural intentions in retail banking", *International Journal of Bank Marketing*, Vol. 25 No. 2, pp. 102-16.

Bloemer, J. and De Ruyter, K. (1998), "On the relationship between store image, store satisfaction and store loyalty", *European Journal of Marketing*, Vol. 32 Nos 5/6, pp. 499-513.

Bloemer, J., De Ruyter, K. and Peeters, P. (1998), "Investigating drivers of bank loyalty: the complex relationship between image, service quality and satisfaction", *International Journal of Bank Marketing*, Vol. 16 No. 7, pp. 276-86.

Bollen, K. (2007), "Interpretational confounding is due to misspecification, not to type of indicator: comment on Howell, Breivik and Wilsox (2007)", *Psychological Methods*, Vol. 12 No. 2, pp. 219-28.

Bollen, K. and Lennox, R. (1991), "Conventional wisdom on measurement: a structural equation perspective", *Psychological Bulletin*, Vol. 110 No. 2, pp. 305-14.

Bollen, K.A. (1989), *Structural Equations with Latent Variables*, John Wiley & Sons, New York NY.

Bollen, K.A. and Ting, K.-F. (2000), "A tetrad test for causal indicators", *Psychological Methods*, Vol. 5 No. 1, pp. 3-22.

Bowman, D., Minehart, D. and Rabin, M. (1999), "Loss aversion in a consumption-savings model", *Journal of Economic Behavior and Organization*, Vol. 38, pp. 155-78.

Byrne, B.M. (1998), *Structural Equation Modeling with LISREL, PRELIS, and SIMPLIS: Basic Concepts, Applications, and Programming*, Erlbaum Associates, Mahwah, NJ.

Caruana, A. (2002), "Service loyalty: the effects of service quality and the mediating role of customer satisfaction", *European Journal of Marketing*, Vol. 36 Nos 7/8, pp. 811-28.

Chiou, J.-S. (2004), "The antecedents of consumers' loyalty toward internet service providers", *Information & Management*, Vol. 41 No. 6, pp. 685-95.

Chiu, H.-C., Hsieh, Y.-C., Li, Y.-C. and Lee, M. (2005), "Relationship marketing and consumer switching behavior", *Journal of Business Research*, Vol. 58 No. 12, pp. 1681-9.

Choi, J., Kim, B.K., Choi, I. and Yi, Y. (2006), "Variety-seeking tendency in choice for others: interpersonal and intrapersonal causes", *Journal of Consumer Research*, Vol. 32 No. 4, pp. 590-5.

Coch, L. and French, J.R.P. Jr (1948), "Overcoming resistance to change", *Human Relations*, Vol. 1 No. 4, pp. 512-32.

Coltman, T., Devinney, T.M., Midgley, D.F. and Venaik, S. (2008), "Formative versus reflective measurement models: two applications of formative measurement", *Journal of Business Research*, Vol. 61 No. 12, pp. 1250-62.

Cooil, B., Keiningham, T.L., Aksoy, L. and Hsu, M. (2007), "A longitudinal analysis of customer satisfaction and share of wallet: investigating the moderating effect of customer characteristics", *Journal of Marketing*, Vol. 71 No. 1, pp. 67-83.

Darling, J.R. and Taylor, R.E. (1989), "A model for reducing internal resistance to change in a firm's international marketing strategy", *European Journal of Marketing*, Vol. 23 No. 7, pp. 34-41.

Day, G.S. (1969), "A two-dimensional concept of brand loyalty", *Journal of Advertising Research*, Vol. 9 No. 3, pp. 29-33.

Dent, E.B. and Goldberg, S.G. (1999), "Challenging resistance to change", *Journal of Applied Behavioral Science*, Vol. 35 No. 1, pp. 25-41.

Dholakia, U.M. (2001), "A motivational process model of product involvement and consumer risk perception", *European Journal of Marketing*, Vol. 35 Nos 11/12, pp. 1340-60.

Diamantopoulos, A. (1999), "Export performance measurement: reflective versus formative indicators", *International Marketing Review*, Vol. 16 No. 6, pp. 444-57.

Diamantopoulos, A. (2008), "Formative indicators: introduction to the special issue", *Journal of Business Research*, Vol. 61 No. 12, pp. 1201-2.

Diamantopoulos, A. (2010), "Reflective and formative metrics of relationship value: response to Baxter's commentary essay", *Journal of Business Research*, Vol. 63 No. 1, pp. 91-3.

Diamantopoulos, A. and Siguaw, J.A. (2006), "Formative versus reflective indicators in organizational measure development: a comparison and empirical illustration", *British Journal of Management*, Vol. 17 No. 4, pp. 263-82.

Diamantopoulos, A. and Winklhofer, H.M. (2001), "Index construction with formative indicators: an alternative to scale development", *Journal of Marketing Research*, Vol. 38 No. 2, pp. 269-77.

Diamantopoulos, A., Riefler, P. and Roth, K.P. (2008), "Advancing formative measurement models", *Journal of Business Research*, Vol. 61 No. 12, pp. 1203-18.

Diamond, M.A. (1986), "Resistance to change: a psychoanalytic critique of Argyris and Schon's contributions to organization theory and intervention", *Journal of Management Studies*, Vol. 23 No. 5, pp. 543-62.

Edwards, J. and Bagozzi, R. (2000), "On the nature and direction of relationships between constructs and measures", *Psychological Methods*, Vol. 5 No. 2, pp. 155-74.

Ewing, M.T. (2000), "Brand and retailer loyalty: past behavior and future intentions", *Journal of Product & Brand Management*, Vol. 9 No. 2, pp. 120-7.

Fitzpatrick, M. (1983), "The definition and assessment of political risk in international business: a review of the literature", *The Academy of Management Review*, Vol. 8 No. 2, pp. 249-54.

Foscht, T., Schloffer, J., Iii, C.M. and Chia, S.L. (2009), "Assessing the outcomes of Generation-Y customers' loyalty", *International Journal of Bank Marketing*, Vol. 27 No. 3, pp. 218-41.

Foxall, G.R. (1993), "The influence of cognitive style on consumers' variety seeking among food innovations", *British Food Journal*, Vol. 95 No. 9, pp. 32-6.

Givon, M. (1984), "Variety seeking through brand switching", *Marketing Science*, Vol. 3 No. 1, pp. 1-22.

Goukens, C., Dewitte, S., Pandelaere, M. and Warlop, L. (2007), "Wanting a bit(e) of everything: extending the valuation effect to variety seeking", *Journal of Consumer Research*, Vol. 34 No. 3, pp. 386-94.

Gounaris, S. and Stathakopoulos, V. (2004), "Antecedents and consequences of brand loyalty: an empirical study", *Journal of Brand Management*, Vol. 11 No. 4, pp. 283-306.

Grapentine, T. (2000), "Path analysis vs structural equation modeling", *Marketing Research*, Vol. 12 No. 3, pp. 12-20.

Grisaffe, D. (2001), "Loyalty – attitude, behavior, and good science: a third take on the Neal-Brandt debate", *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, Vol. 14, pp. 55-9.

Hair, J., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, Prentice-Hall, Upper Saddle River, NJ.

Hallowell, R. (1996), "The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study", Vol. 7 No. 4, pp. 27-42.

Hardin, A.M., Chang, J.C.-J. and Fuller, M.A. (2007), "Formative vs. reflective measurement: comment on Marakas, Johnson, and Clay", *Journal of the Association for Information Systems*, Vol. 9 No. 9, pp. 519-34.

Hardin, A.M., Chang, J.C.-J. and Fuller, M.A. (2008), "Clarifying the use of formative measurement in the is discipline: the case of computer self-efficacy", *Journal of the Association for Information Systems*, Vol. 9 No. 9, pp. 544-6.

Heskett, J. (2002), "Beyond customer loyalty", *Managing Service Quality*, Vol. 12 No. 6, pp. 355-7.

Heskett, J.L., Sasser, W.E. Jr. and Schlesinger, L.A. (1997), *The Service Profit Chain: How Leading Companies Link Profit and Growth to Loyalty, Satisfaction, and Value*, The Free Press, New York, NY.

Hipp, J.R., Bauer, D.J. and Bollen, K.A. (2005), "Conducting tetrad tests of model fit and contrasts of tetrad-nested models: a new SAS macro", *Structural Equation Modeling*, Vol. 12 No. 1, pp. 76-93.

Homburg, C. and Giering, A. (2001), "Personal characteristics as moderators of the relationship between customer satisfaction and loyalty – an empirical analysis", *Journal of Psychology and Marketing*, Vol. 18 No. 1, pp. 43-66.

Homburg, C., Hoyer, W.D. and Fassnacht, M. (2002), "Service orientation of a retailer's business strategy: dimensions, antecedents, and performance outcomes", *Journal of Marketing*, Vol. 66 No. 4, pp. 86-101.

Howcroft, B., Hamilton, R. and Hewer, P. (2007), "Customer involvement and interaction in retail banking: an examination of risk and confidence in the purchase of financial products", *Journal of Services Marketing*, Vol. 21 No. 7, pp. 481-91.

Howell, R., Breivik, E. and Wilcox, J. (2007), "Is formative measurement really measurement? Reply to Bollen (2007) and Bagozzi (2007)", *Psychological Methods*, Vol. 12 No. 2, pp. 238-45.

Jacoby, H.G. and Skoufias, E. (1997), "Risk, financial markets, and human capital in a developing country", *The Review of Economic Studies*, Vol. 64 No. 3, pp. 311-35.

Jarrow, R.A. and Turnbull, S.M. (1995), "Pricing derivatives on financial securities subject to credit risk", *The Journal of Finance*, Vol. 50 No. 1, pp. 53-85.

Jarvis, C.B., Mackenzie, S.B. and Podsakoff, P.M. (2003), "A critical review of construct indicators and measurement model misspecification in marketing and consumer research", *Journal of Consumer Research*, Vol. 30 No. 2, pp. 199-218.

Johnson, M.D., Herrmann, A. and Huber, F. (2006), “The evolution of loyalty intentions”, *Journal of Marketing*, Vol. 70 No. 2, pp. 122-32.

Johnson, M.S., Sivadas, E. and Garbarino, E. (2008), “Customer satisfaction, perceived risk and affective commitment: an investigation of directions of influence”, *Journal of Services Marketing*, Vol. 22 No. 5, pp. 353-62.

Jones, T.O. and Sasser, W.E. Jr (1995), “Why satisfied customers defect”, *Harvard Business Review*, Vol. 73 No. 6, pp. 88-99.

Kahn, B.E. (1995), “Consumer variety-seeking among goods and services: an integrative review”, *Journal of Retailing and Consumer Services*, Vol. 2 No. 3, pp. 139-48.

Kahn, B.E. and Isen, A.M. (1993), “The influence of positive affect on variety seeking among safe, enjoyable products”, *Journal of Consumer Research*, Vol. 20 No. 2, p. 257.

Kahn, B.E., Kalwani, M.U. and Morrison, D.G. (1986), “Measuring variety-seeking and reinforcement behaviors using panel data”, *Journal of Marketing Research*, Vol. 23 No. 2.

Kahneman, D. and Tversky, A. (1979), “Prospect theory: an analysis of decision under risk”, *Econometrica*, Vol. 47 No. 2, pp. 263-91.

Keiningham, T.L., Perkins-Munn, T. and Evans, H. (2003), “The impact of customer satisfaction on share-of-wallet in a business-to-business environment”, *Journal of Service Research*, Vol. 6 No. 1, pp. 37-50.

Kelley, H.H. and Volkart, E.H. (1952), “The resistance to change of group-anchored attitudes”, *American Sociological Review*, Vol. 17 No. 4, pp. 453-65.

Krishnan, M.S., Ramaswamy, V., Mayer, M.C. and Damien, P. (1999), “Customer satisfaction for financial services: the role of products, services, and information technology”, *Management Science*, Vol. 45 No. 9, pp. 1194-209.

Lawrence, P.R. (1986), “How to deal with resistance to change”, *Harvard Business Review*, Vol. 86 No. 6, pp. 37-41.

Lee, J., Lee, J. and Feick, L. (2001), “The impact of switching costs on the customer satisfaction-loyalty link: mobile phone service in France”, *Journal of Services Marketing*, Vol. 15, pp. 35-48.

Long, J.B.D., Shleifer, A., Summers, L.H. and Waldmann, R.J. (1990), “Noise trader risk in financial markets”, *The Journal of Political Economy*, Vol. 98 No. 4, pp. 703-38.

McAlister, L. (1982), “A dynamic attribute satiation model of variety-seeking behavior”, *The Journal of Consumer Research*, Vol. 9 No. 2, pp. 141-50.

McAlister, L. and Pessemier, E. (1982), “Variety seeking behavior: an interdisciplinary review”, *The Journal of Consumer Research*, Vol. 9 No. 3, pp. 311-22.

Maimaran, M. and Wheeler, S.C. (2008), “Circles, squares and choice: the effect of shape arrays on uniqueness and variety seeking”, *Journal of Marketing Research*, Vol. 45 No. 6, pp. 731-40.

Marakas, G., Johnson, R. and Clay, P.F. (2007), “The evolving nature of the computer self-efficacy construct: an empirical investigation of measurement construction, validity, reliability and stability over time”, *Journal of the Association for Information Systems*, Vol. 8 No. 1, pp. 16-46.

Marakas, G., Johnson, R.D. and Clay, P.F. (2008), “Formative vs reflective measurement: a reply to Hardin, Chang, and Fuller”, *Journal of the Association for Information Systems*, Vol. 9 No. 9, pp. 535-43.

Menon, S. and Kahn, B.E. (1995), “The impact of context on variety seeking in product choices”, *Journal of Consumer Research*, Vol. 22 No. 3, p. 285.

Miller, K.D. (1992), “A framework for integrated risk management in international business”, *Journal of International Business Studies*, Vol. 23 No. 2, pp. 311-31.

Mitchell, V.-W. (1999), "Consumer perceived risk: conceptualisations and models", *European Journal of Marketing*, Vol. 33 Nos 1/2, pp. 163-92.

Murray, D. and Howat, G. (2002), "The relationships among service quality, value, satisfaction, and future intentions of customers at an Australian sports and leisure centre", *Sports Management Review*, Vol. 5 No. 2, pp. 25-43.

N'goala, G. (2007), "Customer switching resistance (CSR): the effects of perceived equity, trust and relationship commitment", *International Journal of Service Industry Management*, Vol. 18 No. 5, pp. 510-33.

Nevin, J.A. and Grace, R.C. (2000), "Behavioral momentum and the law of effect", *Behavioral & Brain Sciences*, Vol. 23 No. 1, pp. 73-130.

Newberry, C.R., Klemz, B.R. and Boshoff, C. (2003), "Managerial implications of predicting purchase behavior from purchase intentions: a retail patronage case study", *Journal of Services Marketing*, Vol. 17 No. 6, pp. 609-20.

Panerai, R. (1998), "Assessment of cerebral pressure autoregulation in humans – a review of measurement methods", *Physiological Measurement*, Vol. 19 No. 3, pp. 305-38.

Perkins-Munn, T., Aksoy, L., Keiningham, T. and Estrin, D. (2005), "Actual purchase as a proxy for share of wallet", *Journal of Service Research*, Vol. 7 No. 3, pp. 245-56.

Peter, J.P. and Ryan, M.J. (1976), "An investigation of perceived risk at the brand level", *Journal of Marketing Research*, Vol. 13 No. 2, pp. 184-8.

Petter, S., Straub, D. and Rai, A. (2007), "Specifying formative constructs in information systems research", *MIS Quarterly*, Vol. 31 No. 4, pp. 623-56.

Piderit, S.K. (2000), "Rethinking resistance and recognizing ambivalence: a multidimensional view of attitudes toward an organizational change", *The Academy of Management Review*, Vol. 25 No. 4, pp. 783-94.

Ping, R.A. Jr. (1993), "The effects of satisfaction and structural constraints on retailer exiting, voice, loyalty, opportunism, and neglect", *Journal of Retailing*, Vol. 69 No. 3, pp. 320-52.

Podsakoff, N.P., Shen, W., Podsakoff, P.M. and Ketchen, D.J. (2006), "The role of formative measurement models in strategic management research: review, critique, and implications for future research", *Research Methodology in Strategy and Management*.

Pritchard, M.P., Havitz, M.E. and Howard, D.R. (1999), "Analyzing the commitment-loyalty link in service contexts", *Journal of the Academy of Marketing Science*, Vol. 27 No. 3, pp. 333-48.

Rabin, M. (2000), "Risk aversion and expected-utility theory: a calibration theorem", *Econometrica*, Vol. 68 No. 5, pp. 1281-92.

Ratner, R. and Kahn, B. (2002), "The impact of private versus public consumption on variety seeking behavior", *Journal of Consumer Research*, Vol. 29 No. 2, pp. 246-57.

Reichheld, F.F. (2003), "The one number you need to grow", *Harvard Business Review*, Vol. 81 No. 12, pp. 46-54.

Roehm, H.A. Jr and Roehm, M.L. (2005), "Revisiting the effect of positive mood on variety seeking", *Journal of Consumer Research*, Vol. 32 No. 2, pp. 330-6.

Rossiter, J.R. (2002), "The C-OAR-SE procedure for scale development in marketing", *International Journal of Research in Marketing*, Vol. 19 No. 4, pp. 305-35.

Rossiter, J.R. (2007), "Toward a valid measure of e-retailing service quality", *Journal of Theoretical and Applied Electronic Commerce Research*, Vol. 2 No. 3, pp. 36-48.

Russell-Bennett, R., Mccoll-Kennedy, J.R. and Coote, L.V. (2007), "Involvement, satisfaction, and brand loyalty in a small business services setting", *Journal of Business Research*, Vol. 60 No. 12, pp. 1253-60.

Rust, R.T., Zeithaml, V.A. and Lemon, K.N. (2000), *Driving Customer Equity How Customer Lifetime Value is Reshaping Corporate Strategy*, The Free Press, New York, NY.

Sanchez-Perez, M. and Iniesta-Bonillo, M.A. (2004a), "Consumers felt commitment towards retailers: index development and validation", *Journal of Business and Psychology*, Vol. 19 No. 1, pp. 141-59.

Sanchez-Perez, M. and Iniesta-Bonillo, M.A. (2004b), "Consumers felt commitment towards retailers: index development and validation (Author abstract)", *Journal of Business and Psychology*, Vol. 19 No. 1, pp. 141-60.

Sathye, M. (1999), "Adoption of internet banking by Australian consumers: an empirical investigation", *International Journal of Bank Marketing*, Vol. 17, pp. 324-34.

Sharpe, W.F. (1964), "Capital asset prices: a theory of market equilibrium under conditions of risk", *The Journal of Finance*, Vol. 19 No. 3, pp. 425-42.

Simonson, I. (1990), "The effect of purchase quantity and timing on variety-seeking behavior", *Journal of Marketing Research*, Vol. 27 No. 2, pp. 150-62.

Stauss, B., Schmidt, M. and Schoeler, A. (2005), "Customer frustration in loyalty programs", *International Journal of Service Industry Management*, Vol. 16 No. 3, pp. 229-52.

Stone, R.N. and Gronhaug, K. (1993), "Perceived risk: further considerations for the marketing discipline", *European Journal of Marketing*, Vol. 27 No. 3, pp. 39-50.

Taylor, J.W. (1974), "The role of risk in consumer behavior", *The Journal of Marketing*, Vol. 38 No. 2, pp. 54-60.

Taylor, S.A., Celuch, K. and Goodwin, S. (2004), "The importance of brand equity to customer loyalty", *Journal of Product & Brand Management*, Vol. 13 No. 4, pp. 217-27.

Ting, K.-F. (1998), "The TETRAD approach to model respecification", *Multivariate Behavioral Research*, Vol. 33 No. 1, pp. 157-64.

Trijp, H.C.M.V., Hoyer, W.D. and Inman, J.J. (1996), "Why switch? Product category-level explanations for true variety-seeking behavior", *Journal of Marketing Research*, Vol. 33 No. 3, pp. 281-92.

Trivedi, M. and Morgan, M.S. (2003), "Promotional evaluation and response among variety seeking segment", *Journal of Product & Brand Management*, Vol. 12 No. 6, pp. 408-25.

Tversky, A. and Kahneman, D. (1974), "Judgement under uncertainty: heuristics and biases", *Science*, Vol. 185 No. 4157, pp. 1124-31.

Tversky, A. and Kahneman, D. (1992), "Advances in prospect theory: cumulative representation of uncertainty", *Journal of Risk and Uncertainty*, Vol. 5 No. 4, pp. 297-323.

Ulaga, W. and Eggert, A. (2006), "Value-based differentiation in business relationships: gaining and sustaining key supplier status", *Journal of Marketing*, Vol. 70 No. 1, pp. 119-36.

Val, M.P.D. and Fuentes, C.M. (2003), "Resistance to change: a literature review and empirical study", *Management Decision*, Vol. 41 No. 2, pp. 148-55.

Varey, R.J. (1995), "Internal marketing: a review and some interdisciplinary research challenges", *International Journal of Service Industry Management*, Vol. 6 No. 1, pp. 40-63.

Waddell, D. and Sohal, A.S. (1998), "Resistance: a constructive tool for change management", *Management Decision*, Vol. 36 No. 8, pp. 543-8.

Wilcox, J.B., Howell, R.D. and Breivik, E. (2008), "Questions about formative measurement", *Journal of Business Research*, Vol. 61 No. 12, pp. 1219-28.

Wirtz, J., Mattila, A.S. and OoLwin, M. (2007), "How effective are loyalty reward programs in driving share of wallet?", *Journal of Service Research*, Vol. 9 No. 4, pp. 327-34.

Yoon, Y. and Uysal, M. (2005), "An examination of the effects of motivation and satisfaction on destination loyalty: a structural model", *Tourism Management*, Vol. 26 No. 1, pp. 45-56.

Zins, A.H. (2001), "Relative attitudes and commitment in customer loyalty models: some experiences in the commercial airline industry", *International Journal of Service Industry Management*, Vol. 12 No. 3, pp. 269-94.

Appendix 1

Table AI. Confirmatory tetrad analysis (CTA) – SAS for variety seeking (covariance/correlation matrix read from input matrix)

Yl	Y2	Y3	Y4
0.755	0.418	0.374	0.279
0.418	0.675	0.497	0.433
0.374	0.497	0.793	0.432
0.279	0.433	0.432	2.329

Table AII. Confirmatory tetrad analysis (CTA) – SAS for variety seeking (list of tetrads)

Id	Tetrad	Residual	*t*-value
1	t(1,2,3,4)	0.018634	1.32605
2	t(1,2,4,3)	0.041913	2.24430
3	t(1,3,4,2)	0.023279	1.42234

Table AIII. Confirmatory tetrad analysis (CTA) – SAS for variety seeking (list of non-redundant tetrads

Id	Tetrad	Residual
1	t(1,2,3,4)	0.018634
2	t(1,2,4,3)	0.041913

Table AIV. Confirmatory tetrad analysis (CTA) – SAS for variety seeking (Matrix used for the test)

0.755	0.418	0.374	0.279
0.418	0.675	0.497	0.433
0.374	0.497	0.793	0.432
0.279	0.433	0.432	2.329

Appendix 2

Table AV.
Discriminant validity

	Variety seeking				Resistance to change	
	Thrills	Variety	Newthing	Meeting	Convince	Majmist
Variety seeking						
Seek thrills	1					
Like variety	0.318**	1				
Like new things	0.345**	0.679**	1			
Meeting new people	0.210**	0.483**	0.585**	1		
Resistance to change						
Convince	−0.064*	−0.022	−0.014	−0.016	1	
Major mistake (majmist)	−0.003	0.013	−0.011	0.014	0.489**	1

Note: *Correlation is significant at the 0.05 level (two-tailed); **correlation is significant at the 0.01 level (two-tailed)

Corresponding author
Chris Baumann can be contacted at: chris.baumann@mq.edu.au