

Value and risk in business-to-business e-banking

Frank F. Faroughian ^{a,1}, Stavros P. Kalafatis ^{b,*}, Lesley Ledden ^{c,2}, Phillip Samouel ^{b,3}, Markos H. Tsogas ^{d,4}

^a IDN Ltd., 25–27 Thames Street, Hampton, Middlesex, TW12 2EW, UK

^b Kingston Business School, Kingston University, Kingston-upon-Thames, Surrey, KT2 7LB, UK

^c Kingston Business School, Kingston University, Kingston Hill, Kingston-upon-Thames, Surrey, KT2 7LB, UK

^d University of Piraeus, Dept of Business Administration, 80 Karaoli & Dimitriou Street, 185 34 Piraeus, Greece

ARTICLE INFO

Article history:

Received 15 December 2010

Received in revised form 9 August 2011

Accepted 21 August 2011

Available online 20 December 2011

Keywords:

Value

Risk

e-Banking

ABSTRACT

The purpose of this paper is to examine the role of risk in the formation of perceptions of value in the b2b domain, specifically within e-banking. The functional relationships between three types of risk (performance, financial and psychological) and the benefits and sacrifices components of value are tested within a broader nomological network that includes e-service quality (as an antecedent of value) and satisfaction, word-of-mouth and intention to switch (as outcomes of value). The hypothesised relationships are tested, using Partial Least Squares, on data collected through a postal survey from 167 UK-based SME organisations. The results confirm the significant but differential impact of the three types of risk on the two value components. Specifically performance risk and financial risk are found to be significant determinants of benefits, while psychological risk impacts on perceptions of sacrifices. We also provide evidence of the differential impact of the benefits and sacrifices components of value on satisfaction, and the existence of both direct and indirect (through satisfaction) impact of these components on word-of-mouth and intention to switch. This is the first documented empirical investigation of the impact of perceptions of risk in the study of perceptions of value within the domain of b2b marketing and consequently offers new insights into the subject matter. The theoretical and managerial implications of the findings are discussed and the manner in which the identified relationships can aid future research are explicated.

© 2011 Elsevier Inc. All rights reserved.

1. Introduction

The impact of the internet, in the form of e-commerce, as a driver of strategic decisions within the b2b domain is well documented (see for example Good & Schultz, 2002; Day & Bens, 2005). Furthermore, there is consensus on the influence of the internet as a platform for the development of alternative and/or complementary channels of distribution (Dewan, Freimer, & Seidmann, 2000; Johnson & Whang, 2002; Montoya-Weiss, Voss, & Grewal, 2003; Webb, 2002). The functionality of the technological developments upon which the proliferation of e-commerce related activities is predicated is considered to be especially pertinent in the delivery of financial services such as e-banking. According to Akinci, Aksoy, and Atilgan (2004:212) internet technology “offers institutions alternative or non-traditional delivery channels through which banking products and services can be delivered ... Internet banking (IB) is such a delivery channel that deserves special attention.” Stamoulis, Kanellis, and Martakos (2002)

argue that one of the main criteria on which investment and use of e-banking should be evaluated by both suppliers and customers is risk (a view firmly embedded in supply distribution risk research; Zsidisin, 2003; Ellis, Sockley, & Henry, 2011).

It is further argued that risk is one of the key elements of organisational buying behaviour (see for example Doney & Cannon, 1997; Kumar & Grisaffe, 2004; Mitchell, 1998; Wilson, 1995). According to Dwyer and Tanner (2009:104) “Risk is usually thought of in terms of the probability of an outcome and the importance of cost associated with the outcome.” Kothandaraman and Wilson (2001:382) add that “The ideal partner is one who adds significant value to your market offering and at the same time presents low risk as a partner.” The above indicate the existence of a logical connection between benefits (added value), sacrifices (cost) and risk, a view that is supported by Woodall (2003) who, in his review of value related literature, identified risk as a determinant of perceptions of value.

The b2c literature offers considerable support for the above view (see for example, Agarwal & Teas, 2001, 2004; Keh & Sun, 2008; Kleijnen, de Ruyter, & Wetzels, 2007; Lei, de Ruyter, & Wetzels, 2008; Shamdasani, Mukherjee, & Malhotra, 2008; Snoj, Korda, & Mumel, 2004; Sweeney, Soutar, & Johnson, 1999); however, our review of the literature failed to identify any studies that examine the functional relationship between risk and perceptions of value that are located in the b2b domain (see for example review of value in the business-to-business domain by Lindgreen & Wynstra, 2005). This surprising lack

* Corresponding author. Tel.: +44 20 8547 7121.

E-mail addresses: frankf@idnlt.com (F.F. Faroughian), kalafatis@kingston.ac.uk (S.P. Kalafatis), lledden@kingston.ac.uk (L. Ledden), Phillip.Samouel@kingston.ac.uk (P. Samouel), mtsogas@unipi.gr (M.H. Tsogas).

¹ Tel.: +44 20 8408 8899.

² Tel.: +44 20 8547 7456.

³ Tel.: +44 20 8547 2000.

⁴ Tel.: +30 210 414 2395.

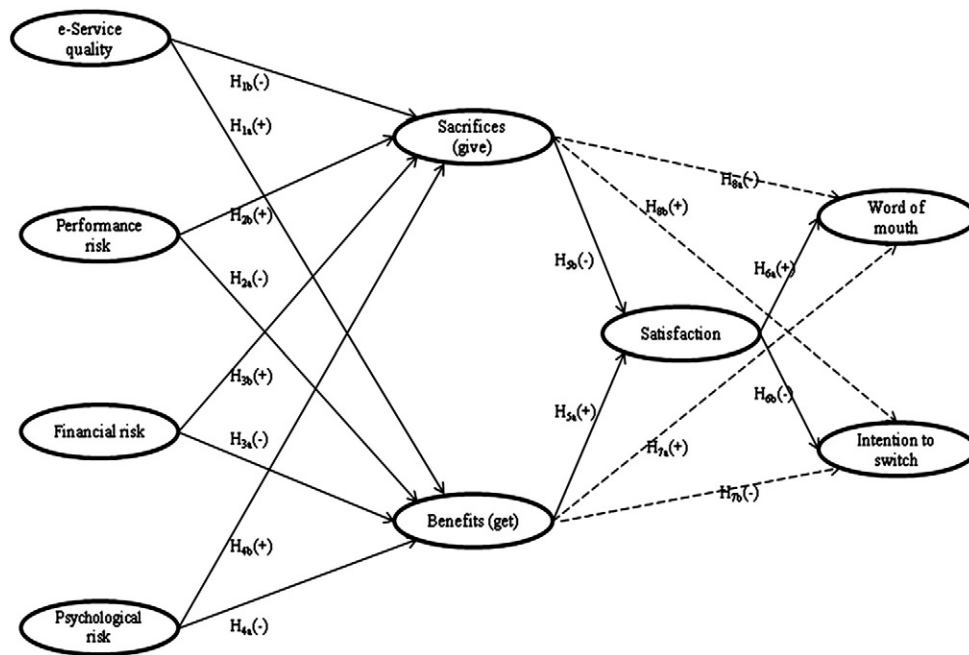


Fig. 1. Conceptual framework.

of related research provides the impetus for this study, the aim of which is to examine the role of risk in the formation of perceptions of value in the b2b domain. Specifically, we locate our research in the e-banking sector because, (a) the b2b literature indicates that risk is especially pertinent in the adoption of e-technology (see for example Forsythe & Shi, 2003; Pavlou, 2003; Tan, 1999), (b) the b2c literature provides corresponding evidence of the importance of risk in consumers' use of e-banking services (see for example, Grabner-Kräuter & Faullant, 2008; Wong, Loh, Yap, & Bak, 2009; Zhao, Koenig-Lewis, Hanmer-Lloyd, & Ward, 2010),⁵ and (c) at the time of this study e-banking was at a mature stage of its development and represented a fairly standardised service across providers, thus minimising potential confounding effects. Specifically, this study examines the impact of risk on customers' perceptions of value derived from the use of (rather than on the decision to adopt) e-banking services. In the next section we present the theoretical foundations on which the research model designed to address the aim of this study is grounded. Debate related to methodological considerations and related actions is followed by presentation of the results of the analysis of the collected data. We proceed to debate the results and locate the findings within extant literature and offer managerial recommendations. The manuscript concludes by delineating the parameters of the investigation and offering suggestions for further research.

2. Theoretical background and model development

The conceptual framework of this study is depicted in Fig. 1. We propose a direct relationship between e-service quality and three types of risk (i.e., performance, financial and psychological) and benefits and sacrifices, the latter which represent the two components of perceived customer value. In turn, the two components of perceived customer value are hypothesised to affect satisfaction and to impact both directly and indirectly on intention to switch and likelihood to provide personal word-of-mouth recommendation. The rationale for studying the behaviour of value at its component level rather than at an aggregate level together with decisions leading to the formulation of specific hypotheses are presented in the following sections.

2.1. The concept of perceived customer value

A summary of definitions of value found in b2b studies is presented in Appendix A. To these we add the predominantly b2c definition by Zeithaml (1988) and the definition by Woodall (2003), the former because it provides a departure point for many of the b2b researchers and the latter because it is considered to represent a pertinent reflection of current thinking in the subject of value. In addition, we recognise the contributions that Holbrook (1994) and Woodruff (1997) make to the study of value, however, the former is exclusively located in the b2c domain and the latter is formally adopted only by Beverland and Lockshin (2003) and Blocker and Flint (2007).

Using an exploratory methodology Zeithaml (1988) concludes that value comprises two components, i.e. *get*, which refers to the utility obtained through a product's benefits, and *give*, which relates to the sacrifices made in order to acquire the benefits. Perceived value is a subjective evaluation of the trade-off between all that is received and all that is given up in the process of acquiring, using or consuming a product. It is self-evident that high value is perceived when a product's benefits are greater than the corresponding costs involved in their acquisition. Although this conceptualisation is embedded in most definitions it is questioned because of its emphasis on cognitive, rational and utility-based considerations and consequently this narrow perspective does not account for the complexity and richness of value perceptions that include the affective and hedonic aspects of consumption (see for example de Ruyter, Lemmink, Wetzels, & Mattson, 1997; Sánchez-Fernández & Iniesta-Bonillo, 2007). Notwithstanding concerns as to the purely rational basis of business exchange (Wilson, 2000), the former criticism is considered less relevant in the b2b domain because of the formalised (at least, to a certain extent) search and evaluation process and multiple-person involvement that characterise the purchasing decisions of organisations (see for example Bunn, 1993; Bunn, Butaney, & Huffman, 2001; Homburg & Kuester, 2001; Park & Bunn, 2003). The relevance of the criticism related to narrowness of perspective is evident in, amongst others, Dodds and Monroe (1985), Monroe (1991), Dodds, Monroe, and Grewal (1991), Gale (1994), Patterson and Spreng (1997), Sirohi, McLaughlin, and Wittink (1998), Sweeney et al. (1999) and Teas and Agarwal (2000), who conceptualise value predominantly in terms of quality and price. The rather dated nature of these studies demonstrates that recent research adopts a wider conceptualisation of benefits and sacrifices.

⁵ We thank one of the anonymous reviewers for directing us to this literature.

On the strength of the above we accept the view that value comprises two main components, *get* or benefits and *give* or sacrifices (in this study we employ the terms benefits and sacrifices). Despite analytical support for treating value as a higher order construct of these two components (Fiol, Alcañiz, Tena, & García, 2009; Lapierre, 2000; Ulaga & Eggert, 2005, 2006a, 2006b), grounded on emerging evidence of the differential behaviour of the benefits and sacrifices components (Spiteri & Dion, 2004; Whittaker, Ledden, & Kalafatis, 2007) as well as questions posed by Edwards (2001) regarding the efficacy of higher order structures, in this study the two value components are allowed to behave independently.

2.2. Antecedents and consequences of value

To aid debate, the extant literature related to antecedents and consequences of value is summarised in Tables 1 and 2. The material presented differs from similar summaries by Spiteri and Dion (2004) and Barry and Terry (2008) in that only empirical papers published in refereed journals are included. Although the relatively small number of related studies makes it difficult to identify a conclusive position, nevertheless there is emerging evidence of a convergence of views.

2.2.1. Antecedents

In terms of antecedents, the majority of the studies listed in Table 1 tested and confirmed the functional relationship between quality and value. In addition, resources and customer focused activities (see for example Blocker, Flint, Myers, & Slater, 2011; Eng, 2005, 2008; Kumar & Grisaffe, 2004) as well as sector specific activities (for example methodology in Patterson & Spreng, 1997; Whittaker et al., 2007) are found to be significant determinants of customer value. On the other hand, the

legitimacy of sacrifices (see Barry & Terry, 2008; Cretu & Brodie, 2007; Kumar & Grisaffe, 2004; Lapierre, Filiatrault, & Chebat, 1999; Menon, Homburg, & Beutin, 2005; Olaru, Purchase, & Peterson, 2008) and benefits (see Olaru et al., 2008) as determinants of value is questioned. Grounded on earlier debate we posit that benefits and sacrifices should be treated as *parts* or *components* rather than determinants of value. In light of this debate, we retain only quality as antecedent to perceptions of value. We expect that higher levels of quality will have a positive impact on perceptions of benefits and will reduce perceptions of sacrifices.

H1a. e-service quality has a positive impact on customers' perceptions of benefits.

H1b. e-service quality has a negative impact on customers' perceptions of sacrifices.

Due to the lack of documented studies in the b2b domain that explicitly examine the relationship between risk and value, we turn to the b2c literature for guidance. Studies by Sweeney et al. (1999), Agarwal and Teas (2001 and 2004), Snoj et al. (2004), Kleijnen et al. (2007), Shamdasani et al. (2008), Keh and Sun (2008), Lei et al. (2008) and Chang and Hsiao (2008) provide evidence of a significant negative direct relationship between risk and consumers' perceptions of value. The stability of the above results is confirmed irrespective of whether risk is operationalised as a single construct (e.g., the metric for risk employed by Sweeney et al. (1999) is the ratio of performance and financial risks) or the risk to value relationship is tested at the dimensional level (see for example Agarwal and Teas (2001, 2004) who treat functional and financial risks as independent determinants of value). However, all of the above studies conceptualise value as a uni-dimensional construct, an approach that we consider to have confounding effects. This

Table 1
Antecedents of customer value.

Author(s)	Quality ^a	Sacrifice	Other variables
Patterson and Spreng (1997)	✓		Outcomes ✓; Methodology ✓; Relationship ✓; Global ✓; Problem identification ✓
Lapierre et al. (1999)	✓	✓	
Kumar and Grisaffe (2004)	✓	✓	Customer focus ✓; Industry leadership ✓; Innovativeness ✓
Eng (2005)			Resource interdependence ✓; Resource fit ✓; Relationship connections ✓; Resource interdependence ✓
Menon et al. (2005)	✓	Purchasing price ✓; Acquisition costs ns; Operations costs ✓	Add-on benefits ✓
Eggert et al. (2006)	✓		Sourcing process ✓; Customer operations ✓
Cretu and Brodie (2007)	✓	✓	Brand image ns; Reputation ✓
Whittaker et al. (2007)	Overall value ✓; Emotional ✓; Functional ✓; Epistemic ns; Social ns; Image ✓; Price/quality ns		Problem identification to: Overall value ✓; Emotional ns; Functional ✓; Epistemic ns; Social ns; Image ✓; Price/quality ns
Barry and Terry (2008)	✓	Cost advantage ✓; Switching costs ✓	Methodology to: Overall value ✓; Emotional ✓; Functional ✓; Epistemic ✓; Social ✓; Image ✓; Price/quality ✓
Eng (2008)			Operational benefits ✓
Gil et al. (2008)			Service orientation ✓; Customer orientation ✓; Market orientation ✓
Han and Sung (2008)			Service encounter ✓
Lee and Bellman (2008)	✓		Supplier's competence ✓
Molinari et al. (2008)			Image ns; Expectations ns
Olaru et al. (2008)		✓	Positive disconfirmation ns; Word of mouth ✓; Satisfaction ✓
Palmatier (2008)	✓		Service benefits ✓; Relationship benefits ✓
La et al. (2009)	✓		Contact density ✓; Contact authority ✓; Service content ✓ (partial)
Jayawardhena (2010)	✓		
Blocker et al. (2011)	✓		Proactive customer orientation (linear) ✓; Responsive customer orientation (linear) ✓; Proactive customer orientation (quadratic) ns; Responsive customer orientation (quadratic) ✓; Interaction of proactive and responsive customer orientation ✓; Personal interaction ✓; Service support ns

Key: ✓ = relationship/pathway is supported; ns = relationship/pathway is not supported.

^a Accounts for a variety of manifestations of quality, e.g. core offering, service efficiency, relationship etc.

Table 2
Consequences of customer value.

Author(s)	Satisfaction	Loyalty ^a	Other variables
Patterson and Spreng (1997)	✓		
Lapierre et al. (1999)	✓	ns	
Eggert and Ulaga (2002)	✓	✓	Search for alternatives ✓; Word of mouth ✓
Kumar and Grisaffe (2004)		✓	
Lam et al. (2004)	✓	✓	Recommendation ns
Spiteri and Dion (2004)	Overall value ✓; Product benefits ✓; Personal benefits ✓; Strategic benefits ✓; Sacrifices ns	Overall value ✓; Product benefits ✓; Personal benefits ✓; Strategic benefits ✓; Sacrifices ns	Overall value to market performance ns; Product benefits to market performance ✓; Personal benefits to market performance ns; Strategic benefits to market performance ns; Sacrifices to market performance ns
Liu et al. (2005)	✓	✓	Switching costs ✓
Liu (2006)			Economic value to switching costs ✓; Support value to switching costs ✓; Core value to switching costs ns
Bontis et al. (2007)	✓		
Cretu and Brodie (2007)		✓	
Whittaker et al. (2007)	Overall value ✓; Emotional ns; Functional ns; Epistemic ns; Social ✓; Image ns; Price/quality ✓	Overall value to loyalty ✓; Emotional ns; Functional ns; Epistemic ✓; Social ns; Image ns; Price/quality ✓	
Barry and Terry (2008)		Overall value ✓; Economic ✓; Strategic ✓	Commitment (affective) ✓
Gil et al. (2008)	✓		
Han and Sung (2008)	✓		Commitment (behavioural and affective) ✓
Lee and Bellman (2008)	✓		
Molinari et al. (2008)		✓	Word of mouth ns
Olaru et al. (2008)		✓	Recommendation ✓
La et al. (2009)	✓		
Chan et al. (2010)	Economic ✓; Relational ✓		
García-Acerbrón et al. (2010)	✓		Price tolerance ns
Blocker (2011)	✓		
Jayawardhena (2010)	✓	✓	
Blocker et al. (2011)	✓		

Key: ✓ = relationship/pathway is supported; ns = relationship/pathway is not supported.

^a A 'catch all' term to include loyalty, re-patronage, repurchase etc.

viewpoint is based on the expected differential directionality in the functional relationships between risk and the benefits and sacrifices components of value. Specifically, we expect that perceptions of risk will have a negative impact on perceptions of benefits while the corresponding relationship between risk and sacrifices will be positive; furthermore it is reasonable to expect that, irrespective of significance, the impact of financial risk on sacrifices will be stronger compared to the latter's corresponding relationship with psychological risk. Acceptance of this logic offers additional support to our earlier decision to treat the benefits and sacrifices components of value as separate constructs.

Within the b2b literature there is general consensus that the main sources of perceived risk are financial, performance and social (Brennan, Canning, & McDowell, 2010; Dwyer & Tanner, 2009). This classification is consistent with authors such as Ho and Ng (1994) and Mitchell (1998) who identify three types of context-specific (i.e., e-banking)

risks, namely performance, financial and psychological. Collectively the above debate leads to the formulation of the following hypotheses:

H2a. Performance risk has a negative impact on customers' perceptions of benefits.

H2b. Performance risk has a positive impact on customers' perceptions of sacrifices.

H3a. Financial risk has a negative impact on customers' perceptions of benefits.

H3b. Financial risk has a positive impact on customers' perceptions of sacrifices.

H4a. Psychological risk has a negative impact on customers' perceptions of benefits.

Table 3
Dimensions of the benefits and sacrifices components of value.

Temporal stages as denoted in Woodall (2003)	Conceptualisations of the value components	
	Benefits	Sacrifices
Acquisition	Generic benefits derived through the use of e-banking [acquisition]	Costs related to obtaining dedicated hardware and software as well as employment and training of personnel [monetary]
Transaction	Benefits accrued through e-banking based transacting [transaction]	On-going costs related to learning and effectively implementing e-banking [time]
In-use	Benefits derived through-banking related reporting and auditing facilities [in-use]	Effort exerted in order to effectively use e-banking [effort]
Redemption	Additional/enhanced functionality resulting from the use of e-banking [redemption]	Loss of social or inter-personal interaction due to the impersonal nature of e-banking [social]

H4b. Psychological risk has a positive impact on customers' perceptions of sacrifices.

2.2.2. Consequences

Evidence related to consequences of value presented in Table 2 is conclusive insofar that, of the 17 studies that test the value–satisfaction relationship, all confirm the significant impact of value on satisfaction. The related hypotheses are as follows:

H5a. Perceptions of benefits have a positive impact on customers' perceptions of satisfaction.

H5b. Perceptions of sacrifices have a negative impact on customers' perceptions of satisfaction.

In addition to satisfaction, the information in Table 2 confirms the positive impact of perceptions of value on two behavioural constructs, namely loyalty (or intention to switch) and, to a lesser extent, word-of-mouth (or recommendation). Of the 10 studies in Table 2 that examine the functional relationship between value and loyalty only Lapierre et al. (1999) fail to confirm the pathway. Consequently, this construct is included as an outcome of the two value components. The impact of value on word-of-mouth is less clear, with Eggert and Ulaga (2002), Han and Sung (2008) and Olaru et al. (2008) reporting a positive relationship while the studies by Lam, Shankar, Erramilli, and Murthy (2004) and Molinari, Abratt, and Dion (2008) fail to confirm the significance of this relationship. Despite equivocal evidence, given the importance of personal word-of-mouth recommendation in the b2b domain (Ellis, 2011) and especially in b2b services (Michel, Naudé, Salle, & Valla, 2003), word-of-mouth is included as a second behavioural outcome; however, even though the b2b value related literature overlooks the issue, amongst b2c researchers there is ongoing debate as to whether the value to behavioural intention relationship is direct or indirect, i.e. fully mediated by satisfaction. Current evidence is equivocal insofar that a number of empirical investigations offer support for both direct and indirect effect (see Cronin, Brady, & Hult, 2000; Hackman, Gundergan, Wang, & Daniel, 2006; La, Patterson, & Styles, 2009; Oh, 1999; Yang & Peterson, 2004), while others support the mediating role of satisfaction (see Carpenter, 2008; Gallarza & Saura, 2006; Hsu, 2008; Mathwick, Malhotra, & Rigdon, 2001; McDougall & Levesque, 2000; Overby & Lee, 2006). Graf and Maas (2008:17) attribute the above divergence to whether or not researchers accept the view espoused by Fishbein and Ajzen (1975) in their Theory of Reasoned Action, that “cognitive variables are mediated by affective ones to result in cognitive outcomes”. Specifically, the mediating role of satisfaction between value and behaviour is grounded on the view that value is predominantly a cognitive construct while satisfaction is an affective construct. In order to shed light on the matter, direct functional relationships between the two components of value to word-of-mouth and intention to switch are added to the model (indicated by dotted lines).

The resultant hypotheses are listed below and we acknowledge that, under the principles of Transaction Cost Analysis, the direction of H_{8b} could have been negative (see debate in Rindfleisch & Heide, 1997). Investments, i.e. monetary sacrifices in the form of the acquisition of transaction specific assets such as equipment, software etc., and economic commitment to recruiting and/or training personnel in the use of e-banking can act as barriers to the termination of a business relationship, thus resulting in a negative relationship between perceived sacrifices and intention to switch.

H6a. Satisfaction has a positive impact on word-of-mouth.

H6b. Satisfaction has a negative impact on intention to switch.

H7a. Perceived benefits have a positive impact on word-of-mouth.

H7b. Perceived benefits have a negative impact on intention to switch.

H8a. Perceived sacrifices have a negative impact on word-of-mouth.

H8b. Perceived sacrifices have a positive impact on intention to switch.

3. Methodology

3.1. Population, sampling and data collection

The target population comprised the top 1200 UK-based SMEs (in terms of turnover). This decision is based on the expectation that larger SMEs are more likely to engage in the activities being examined in this study and to have formal and systematic procedures for evaluating related actions. An appropriate sampling frame was obtained from a specialist list broker. The list contained detailed company information (e.g., postal address, turnover, type of industry etc.) as well as names and contact details (i.e., telephone, fax and email address) of its executives. Data were collected, using guidelines outlined in Dillman (2007), by means of a postal self-completion survey addressed to the highest-ranking corporate executive. A total of 167 usable replies were received, a number that adheres to the analytical recommendations proposed by Barclay, Higgins, and Thompson (1995) and, excluding undeliverable and unusable replies, represents a 22% response rate.

In terms of company size, 41% employed over 150 employees with another 30% in the 100–149 range; consequently, the sample fulfils our specification of the population. The majority of the companies operated in the manufacturing sector (44%), while the building and allied trades (22%), services (17%) and the retail and wholesale sectors (10%) were also represented. As for length of time using e-banking, the majority (68%) were in the 6–10 year range, 30% used the service for five or less years, leaving 2% with experience over 11 years; thus confirming our view that, at the time of this study, e-banking was at a mature stage of its development. The usual tests of non-response bias were carried out (i.e., limited follow-ups, comparison of early and late responses etc.; Armstrong & Overton, 1977) and the representativeness of the sample was confirmed.

3.2. Measures and measurement

The overwhelming majority of researchers in the b2b domain consider the benefits and sacrifices components of value to represent multi-dimensional constructs (see Blocker, 2011; Eggert, Ulaga, & Schultz, 2006; Fiol, Alcañiz, Tena, & García, 2011; Fiol et al., 2009, 2011; Lapierre, 2000; Liu et al., 2005; Olaru et al., 2008; Spiteri and Dion, 2004; Ulaga and Eggert, 2005, 2006a, 2006b; Whittaker et al., 2007). Although the existence of validated scales is acknowledged, the need to account for the temporal nature of the phenomenon under examination (i.e., investment in and ongoing use of an e-service) leads us to propose alternative conceptualisations. Our position is grounded on debate presented by Woodall (2003:10) who suggests that value should reflect a longitudinal perspective, i.e. encompass perceptions of value at the stages of pre-purchase, the point of trade or experience, post-purchase, and after use or experience. Unfortunately, although Woodall (2003:14) provides a list of benefits and sacrifices he offers no explicit mapping or correspondence with these temporal stages and consequently we turn to the e-banking literature for guidance. In addition, given that, as indicated in the preceding section, the study population comprised experienced users of e-banking, our conceptualisation attempts to reflect the sequential nature of benefits and sacrifices rather than to account for temporal aspects of value in a truly longitudinal sense.

Examination of literature ranging from attitudes towards, satisfaction with, and acceptance and use of, e-banking resulted in the delineation presented in Table 3, with names in square brackets indicating our adopted terminology. For clarity, we retain as much as possible of the nomenclature proposed by Woodall (2003) and, in so doing, we acknowledge that our use of redemption is a proxy rather than a precise

expression of its literal meaning (this applies especially to social costs). The information in Table 3 indicates that we conceptualise the benefits and sacrifices components of value as higher order constructs, each comprising four dimensions. Acquisition, transaction, in-use and redemption represent the dimensions of the former while the latter consists of the monetary, effort, time and social dimensions.

E-service quality is operationalised using the conceptualisation developed by Parasuraman et al. (2005), which depicts e-service quality as a second order construct of the following lower order dimensions: efficiency, fulfilment, system availability and privacy (the latter dimension was contextualised for the b2b domain to reflect security). Accepting Rossiter's (2002) arguments, satisfaction is treated as having a concrete attribute (i.e., is clearly understood by respondents and therefore has universal meaning for them); consequently, as in Baumann et al. (2007), a single item measure is employed. For the remaining constructs, consistent with the framework proposed by Engelland et al. (2001) scales are developed from extant literature and discussions with subject experts. A 5-point Likert scale anchored at 'Strongly agree' and 'Strongly disagree' is used throughout, except in the case of satisfaction. Based on recommendation by Peter et al. (1993) and in order to, at least, partially account for the temporal nature of perceptions of value, the question for the latter construct is framed using 'Think back to the time when your company started using your bank's e-banking services' and answers are provided using a 5-point scale anchored at 'Very much better than expected' and 'Very much poorer than expected'. The number of items in the scales together with their sources and the wording of the questions are presented in Appendix A.

Decisions related to construct-to-measures relationships (i.e., whether reflective or formative) are based on the guidelines provided by Jarvis et al. (2003). Despite concerns regarding the proposed formative nature of the dimensions of e-service quality we acknowledge the approach employed by the developers of the scale and treat them as reflective. Word-of-mouth and intention to switch are also treated as reflective constructs while the dimensions of the benefits and sacrifices components of value and the three dimensions of risk are treated as formative. In terms of the proposed higher order structure of the value components, the related literature evinces a lack of consensus. For example, Lapierre (2000), Liu et al. (2005) and Fiol et al. (2009 and 2011) treat value as a reflective latent variable while Ulaga and Eggert (2005, 2006a, 2006b), Whittaker et al. (2007) and García-Acerbrón et al. (2010) adopt a formative structure. Lin et al. (2005) and more recently Blocker (2011) provide empirical evidence of the analytical stability of both formative and reflective structures and suggest that, on balance, formative structures should be adopted. This conclusion is consistent with general guidelines provided by Jarvis et al. (2003) and consequently the benefits and sacrifices components of value are treated as second order formative latent variables of their respective dimensions. Using the same guidelines and, after reference to the footnote on page 220 in Parasuraman et al. (2005), we treat e-service quality also as a higher order formative construct. The resulting higher order structures of e-service quality, benefits and sacrifices are depicted in Fig. 2.

4. Analysis and results

The presence of both reflective and formative constructs led to the use of Partial Least Squares (PLS; see Chin and Newsted, 1999; Fornell and Bookstein, 1982; Haenlein and Kaplan, 2004; Tenenhaus et al., 2005) and specifically the PLS GRAPH software developed by Chin (2003). In assessing the solutions, we examine the R^2 values, predictive relevance (Q^2 for reflective dependent variables should be greater than zero) of individual dependent variables and meaningfulness of standardised path coefficients (i.e., whether greater than 20; see Chin, 1998, xiii). The bootstrapping re-sampling procedure (500 sub-samples) is employed when testing for the significance of the hypothesised functional relationships. The contribution of each determinant to the R^2 of a dependent variable is assessed using the procedure proposed by Tenenhaus et al. (2005).

4.1. Measurement model

For the reflective constructs, indicators are retained if, (a) they exhibit loadings with the intended construct of .70 or more, and (b) are statistically significant (bootstrap analysis of 500 sub-samples). In addition, composite reliability should exceed .70 (Fornell and Larcker, 1981). Convergent validity is assessed by average variance extracted (AVE with a benchmark of .50; Fornell and Larcker, 1981) and the structure is further confirmed by examination of the component structure (theta) matrix (results not included for brevity). For confirmation of discriminant validity the square root of each construct's AVE should be greater than its bivariate correlation with the other constructs in the model. Information presented in Appendix A indicates that all reflective scales met the above criteria. Following recommendations by Mathieson et al. (2001) and Diamantopoulos et al. (2008) the independence of the indicators of the formative constructs is assessed. Collinearity analysis (i.e., examination of VIF values, conditional indices and the decomposition of the coefficients variance matrix; Hair et al. (1998)) revealed no problems. Furthermore, the proposed higher order structures of e-service quality, benefits and sacrifices are tested using the repeated manifest variables approach reported in Wetzels et al. (2009). The results presented in Table 4 support the proposed conceptualisations.

4.2. Structural models

The results presented in Table 5 indicate that, with the exception of intention to switch, both models possess considerable explanatory powers (especially for benefits and sacrifices) and exhibit acceptable predictive relevance. The introduction of direct pathways from the two components of value to the behavioural outcomes results in significant increases in the R^2 of the latter constructs. Consequently, the model containing the direct effects of the value components on behavioural outcomes is adopted. Focusing on the structural relationships, differentiation in the impact of the four antecedents of the value components is evident, i.e. e-service quality and psychological risk are significant determinants of benefits (i.e., H_{1a} and H_{4a} are supported) while performance and financial risks significantly impact on perceptions of sacrifice (H_{2b} and H_{3b} are supported). Differentiation is also present in pathways linking satisfaction, word-of-mouth and intention to switch with their antecedents. Of the two components of value, only benefits demonstrates a significant relationship with satisfaction (H_{5a} is supported), word-of-mouth is determined by satisfaction and benefits (H_{6a} and H_{7a} are supported) while sacrifices is the only significant determinant of intention to switch (H_{8b} is supported). Reference to the contributions to R^2 values indicates that formation of perceptions of benefits is dominated by e-service quality; however, at the same time performance and financial risks have comparable contributions to the R^2 of sacrifices. Benefits is the major contributor to the R^2 of satisfaction and word-of-mouth while sacrifices dominates the R^2 of intention to switch.

5. Discussion and conclusions

The aim of this study is to examine the role of risk in the formation of perceptions of value in b2b e-banking; in addition it contributes to the limited debate regarding the mediating role of satisfaction between perceptions of value and behavioural outcomes. The above are achieved through empirical testing of a theoretically grounded model that includes e-service quality, the benefits and sacrifices components of value, three types of risks (performance, financial and psychological), satisfaction, and two behavioural outcomes (word-of-mouth and intention to switch). The proposed hypotheses are discussed in turn.

E-service quality is found to be a significant determinant of the benefits but not of the sacrifices component of value (i.e., support H_{1a} but not H_{1b}). In addition, we report that e-service quality is the major contributor in variance explained in benefits (i.e., contributes

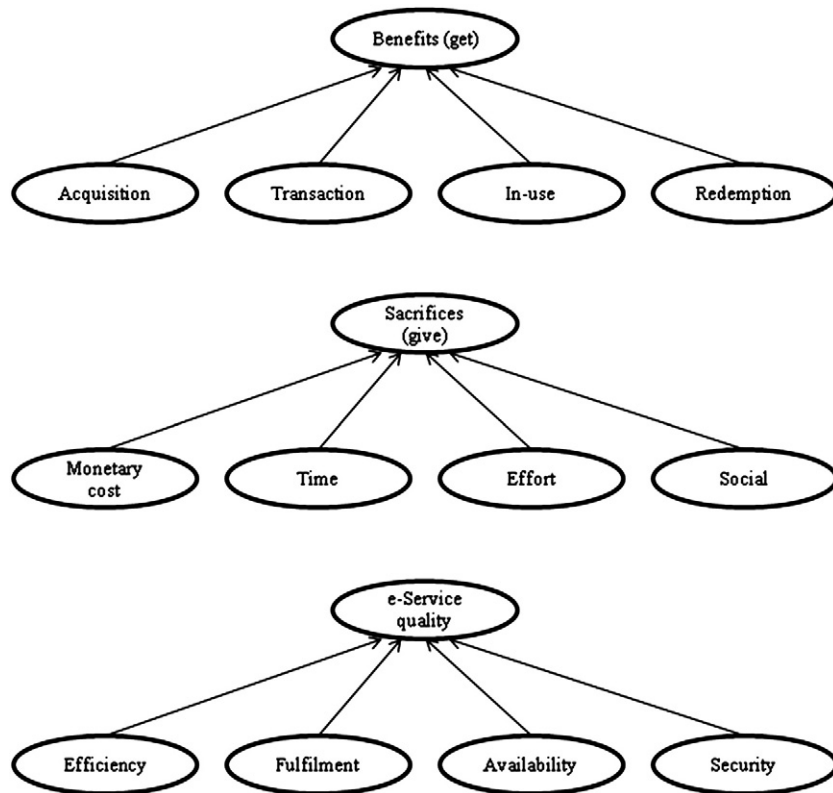


Fig. 2. Conceptualisations of e-service quality, benefits and sacrifices.

.81 to the R^2 of benefits). These results are broadly in line with those reported by Whittaker et al. (2007) who found support for the impact of (service) quality on dimensions of the benefits component of value (i.e., emotional, functional, image) but not on the single dimension of sacrifices (i.e., price/quality). At the same time, the reported differential impact of e-service quality on benefits and sacrifices raises questions regarding the stability of results reported by studies that either do not explicitly include aspects of sacrifice (Barry and Terry, 2008; Cretu and Brodie, 2007; Eggert et al., 2006; Lapierre et al., 1999) or combine benefits and sacrifices as an overall uni-dimensional construct (Barry and Terry, 2008; Blocker et al., 2011; Cretu and Brodie, 2007; Eggert et al., 2006; Gil et al., 2008; Han and Sung, 2008; Jayawardhena, 2010; Kumar and Grisaffe, 2004; La et al., 2009; Lapierre et al., 1999; Menon et al., 2005; Molinari et al., 2008; Patterson and Spreng, 1997) or conceptualise value as a business or economic outcome (Eng, 2005; Palmatier, 2008).

Table 4
Higher order structures.

Pathways	Standardised path coefficients (t-values)
Benefits	
Acquisition	0.301 (33.77***)
Transaction	0.299 (47.36***)
In-use	0.293 (32.08***)
Redemption	0.305 (29.96***)
Sacrifices	
Monetary cost	0.295 (32.71***)
Time	0.299 (35.31***)
Effort	0.270 (42.25***)
Social	0.280 (28.98***)
e-Service quality	
Efficiency	0.313 (20.59***)
Fulfilment	0.337 (27.77***)
Availability	0.241 (18.98***)
Security	0.286 (23.62***)

Note: *** $p < .001$.

The significant impact of risk on both the components of value justifies its inclusion in this investigation. Specifically, we offer empirical support for the significant impact of performance and financial risks on perceptions of sacrifices (H_{2b} and H_{3b} are supported) but not on the formation of perceptions of benefits (H_{2a} and H_{3a} are not supported). The reverse pattern applies to psychological risks, i.e. we offer support for the impact of this type of risk on perceptions of benefits (H_{4a}) but not on sacrifices (H_{4b}). Collectively, performance and financial risk account for .82 of the R^2 associated with sacrifices while psychological risk contributes only .15 to the R^2 of benefits. As already stated, this is the first study in the b2b domain that examines the impact of risk on the formation of perceptions of value, consequently directly comparable literature is not available. Our findings are broadly consistent with b2c literature that offers conclusive support for the impact of risk on value perceptions (see Kleijnen et al., 2007; Lei et al., 2008; Snoj et al., 2004; Sweeney et al., 1999). For example, the significant impact of performance and financial risks on sacrifices is in line with Sweeney et al. (1999:81) who state that, within the value domain, risk represents a “subjective expectation of loss”, while the significant relationship between psychological risk and benefits accords with Agarwal and Teas (2001) who suggest that assessment of risk affects perceptions of expected performance. At the same time, an important difference emerges between our results and those reported in the b2c literature, which relates to the differential behaviour of the pathways between specific types of risk and the two components of value. We suggest that there is considerable danger of confounding effects present in the b2c literature due to the fact that all of the related studies treat value as a uni-dimensional construct (mainly as value for money) and, with the exception of Agarwal and Teas (2001, 2004), Keh and Sun (2008) and Lei et al. (2008), adopt a uni-dimensional operationalisation of risk.

Despite the lack of directly related literature, it is logical to expect that if customer value is a significant determinant of satisfaction, the same will apply to the relationship between its two components and satisfaction (positive for benefits and negative for sacrifices). The results reported in Table 5 confirm the impact of benefits (H_{5a} is supported)

Table 5
Regression coefficients of hypothesised pathways and fit indices.

Structural pathways			Standardised path coefficients (t-value)			
			No direct effects from value to WOM and switch		Direct effects from value to WOM and switch	
H _{1a} (+)	e-Service quality	→ Benefits	.690 (6.62***)	.728 (8.22***)	.81	
H _{1b} (–)		→ Sacrifices	–.150 (0.30)	–.200 (0.40)	.01	
H _{2a} (–)	Performance risk	→ Benefits	.040 (0.436)	.054 (0.62)	.01	
H _{2b} (+)		→ Sacrifices	.190 (1.59)	.233 (1.97*)	.46	
H _{3a} (–)	Financial risk	→ Benefits	.059 (0.59)	.050 (0.53)	.03	
H _{3b} (+)		→ Sacrifices	.329 (2.11*)	.366 (2.21*)	.36	
H _{4a} (–)	Psychological risk	→ Benefits	–.200 (2.49**)	–.201 (2.59**)	.15	
H _{4b} (+)		→ Sacrifices	.219 (1.51)	.225 (1.36)	.17	
H _{5a} (+)	Benefits	→ Satisfaction	.529 (4.79***)	.510 (4.77***)	.99	
H _{5b} (–)	Sacrifices	→ Satisfaction	.029 (0.10)	.013 (0.07)	.01	
H _{6a} (+)	Satisfaction	→ WOM	.461 (8.70***)	.241 (2.99**)	.32	
H _{6b} (–)		→ Switch	–.088 (0.99)	–.102 (0.70)	.00	
H _{7a} (+)	Benefits	→ WOM		.426 (4.59***)	.68	
H _{7b} (–)		→ Switch		–.004 (0.20)	.08	
H _{8a} (–)	Sacrifices	→ WOM		–.018 (0.02)	.00	
H _{8b} (+)		→ Switch		.317 (1.76*)	.92	
		R ²	Q ²	R ²	ΔR ²	Q ²
Benefits		0.650		0.668		
Sacrifices		0.624		0.613		
Satisfaction		0.275		0.259		
WOM		0.213	0.37	0.343	16.03***	0.38
Switch		0.008	0.39	0.109	9.18***	0.40

Note: * $p < 0.05$; ** $p < .01$; *** $p < .001$.

but not of sacrifices (H_{5b} is not supported) on satisfaction. The potential time-dependent nature of value of e-banking offers an explanatory avenue.⁶ Notwithstanding the need for continuous upgrades in hardware, software and training, some of the monetary sacrifices take place prior to benefits received through the use of e-banking; thus, since the responding companies had already adopted e-banking at the point when the study was conducted, benefits dominated their answers. On the other hand, the results raise further questions regarding the potential confounding effects of aggregation and the consequent impact of incomplete operationalisations (a deficiency directly related to issues of content validity) on current knowledge.

The issue of confounding effects is already expressed and relates to potential implications of aggregating constructs (such as benefits and sacrifices) that operate in opposite directions. The issue of incomplete operationalisations is best illustrated by reference to the studies by Spiteri and Dion (2004) and Whittaker et al. (2007), which examine the impact of value on satisfaction at both aggregate (value as an overall construct) and disaggregate (the dimensions of value operate independently) levels. The former study finds no support for the impact of sacrifice on satisfaction while the latter study supports the functional relationship of these constructs. The reason for this divergence of results is found in the studies' respective operationalisations, i.e. in a similar way to this study, Spiteri and Dion (2004) operationalise sacrifice as comprising money, time and effort while Whittaker et al. (2007) use a value for money approach.

Of the hypothesised direct effects of benefits and sacrifices on behavioural outcomes, the former is found to be a significant determinant of word-of-mouth but not of intention to switch (H_{7a} is supported but not H_{7b}) while the reverse is observed for sacrifices (i.e., H_{8b} is supported but not H_{8a}). In addition, benefits is found to be a stronger contributor in explaining variation in word-of-mouth compared to satisfaction (corresponding values are .68 and .32).

Although the above are broadly in line with information presented in Table 2, due care and attention is required when considering our findings in relation to those of other studies. For example, a claim that the results reported here are in line with those by Cretu and Brodie

(2007) ignores the fact that the latter study employs a single measure of intention that is a composite of word-of-mouth and future amount of business; consequently, it is not possible to partition, or accurately allocate, the impact of value on each of these two types of behaviour. Conversely, it is inaccurate to state that the results of this study are contrary to those by Lapierre et al. (1999) because these authors, (a) commit the same specification error in measuring intention as Cretu and Brodie (2007), (b) treat sacrifices as an antecedent rather than a component of value, and (c) omit to test for the direct impact of sacrifices on intention. Furthermore, the study by Olaru et al. (2008) that reports the significant direct impact of overall value on re-purchase intention (loyalty) and recommendation omits to include satisfaction in the model. In conclusion, we suggest that, when examining the impact of value on behavioural outcomes, there is sufficient evidence to support the need to treat value at its component (rather than aggregate) level and account for different types of behavioural outcomes.

Finally, satisfaction is found to be a significant determinant of word-of-mouth (H_{6a} is supported) but not of intention to switch (H_{6b} is not supported). We identified only two studies that examine the simultaneous impact of satisfaction on the above behavioural outcomes within the b2b value domain. Lam et al. (2004) and Bontis et al. (2007) confirm the significant relationships between satisfaction and both the behavioural outcomes. The former is of particular relevance to this investigation because it accounts for direct effects from overall value to loyalty and recommendation. On page 308 of their paper, Lam et al. (2004) conclude that "Interestingly, we found difference in the role between the two loyalty dimensions. While customer satisfaction *totally* mediates the impact of customer value on the recommend dimension, the mediation is only *partial* for the patronage dimension." (italics in the original). Despite the lack of complete correspondence between our results and those of the above authors (mainly due to the latter authors' treatment of value as a uni-dimensional construct), nonetheless there is support for our view that examination of the subject matter should include both direct and mediated (through satisfaction) relationships between value and behavioural outcomes. Using the logic presented in Lam et al. (2004:308) we conclude that recommendation of an e-banking provider is driven mainly through an affective state (satisfaction) that, in turn, is formed through perceptions of benefits received; on the other hand, intention to switch is the result of cognitive processes related to sacrifices made.

⁶ We thank one of the anonymous reviewers for this insight.

Collectively our results are considered to make the following contributions. Although e-banking is the focal sector of this investigation, to our knowledge, this is the first examination of the functional relationships between different types of risk and perceptions of value within the broad b2b field. Focusing on the e-banking domain, our findings confirm the view that risk is a significant determinant of perceptions of value and offer insight into the behaviour of types of risk. Evidence of differential patterns amongst the functional relationships of benefits and sacrifices supports the disaggregate approach adopted by Spiteri and Dion (2004) and Whittaker et al. (2007) and represents a challenge to results reported by studies that model value as either a uni-dimensional or as an aggregate higher order multi-dimensional construct. Although further research is required in order to reach a defensible position, our findings are in line with general views expressed by Edwards (2001) regarding the lack of clarity and confounding effects associated with the use of higher order structures. Finally, we extend the results reported by Lam et al. (2004) by demonstrating the mediating role of satisfaction in the impact of value on different types of behavioural intention.

5.1. Managerial implications

The findings reported above can guide managerial actions and consequently they make a number of important contributions to practice. The quality of the e-banking system is clearly the starting point in the provision of the related e-services. Fast response, well designed interface and clear instructions for access to, and use of, the e-banking service are essential pre-requisites together with security safeguards. Furthermore, given the company/customer specificity of accounting and financial operations, the provider (i.e., the bank) must offer functional flexibility and/or adaptation facilities that allow customers to take full advantage of, and seamlessly integrate, e-banking with their systems. These aspects of the e-banking services must be clearly demonstrated during use, while communications with clients should equally emphasise the four main themes of e-service quality (i.e., efficiency, fulfilment, availability and security). However, the non-significant relationship between e-service quality and sacrifices suggests that the benefits derived from the e-service should be stressed. Although communications messages should account for the whole life-cycle of the use of the e-service (i.e., from acquisition to redemption) the usage stage of each customer should be identified and the specific benefits related to that stage emphasised. For example, for a potential customer (i.e., one at the acquisition stage) issues of efficiency and improved performance should form the core of the message while, for those already using the system, added-value in the form of the greater benefits provided than their previous system should be emphasised.

Given the nature of e-banking it is inevitable that elements of risk represent issues that must be addressed at performance, financial and psychological levels. We provide evidence that related messages need to be focused to reflect the differential relationships of the above types of risk with the value components. Providers of e-banking services should emphasise how rigour, thoroughness and adherence to security protocols (e.g., digital encryption) minimise performance and financial risks and help users reduce costs such as the need for additional security software and special training of their staff. At the same time customers should be assured that the use of e-banking will have no detrimental impact on company status and will not cause psychological harm to their employees. For new customers, the above can be achieved through the use of case studies and advocacy by those companies already using the facilities. For existing customers, the e-banking provider should offer advice regarding how the reduction of risk can be leveraged in order for customers to obtain greater benefits and reduce their sacrifices; for example, personal gains by staff through the reduced number of clerical errors (i.e., psychological benefits) or evidence of how a reduction in fraud has positively affected the company (i.e., reduction in sacrifices).

The behaviour of the value components to satisfaction suggests that efforts designed to enhance customer satisfaction should focus on improving perceptions of received benefits rather than reduction in perceptions of sacrifices. Providing operating manuals that include detailed instructions of how the use of e-banking can make a positive contribution to a company's revenue, or excellence in terms of functionality, represent means of achieving the above. In addition, evidence of both direct and mediated (through satisfaction) effects of perceptions of benefits and sacrifices has important managerial implications. If the development of positive word-of-mouth is a desired outcome (i.e., attracting new customers through referrals), providers of e-banking should not only attempt to improve perceptions of received benefits (direct effects) but also should monitor changes in levels of customer satisfaction (mediated effects). Given the competitive nature of businesses, rather than relying on active recommendations, it is suggested that a more fruitful avenue would be for the provider to work together with satisfied customers to create exemplars or case studies in the form of narrative stories that could be used to promote the e-banking services. On the other hand, intention to switch (i.e., improving loyalty) will best be minimised through demonstration of a reduction in customer costs (direct effects) through the employment of e-banking. This can be effected through the employment of IT platforms that are easily accessible to customers and using familiar interfaces that reduce perceptions of sacrifice and diminish the intention to switch.

6. Limitations and further research

Despite the merits of this research and the contributions that it makes to knowledge and practice, this study contains certain limitations, which, considered together with insights from the conclusions, offer opportunities for further research. First, reflecting on the accepted view that value is idiosyncratic and contextual in nature (see for example Ravald and Grönroos, 1996; Sánchez-Fernández and Iniesta-Bonillo, 2007; Woodall, 2003; Zeithaml, 1988) constructs such as ethics, strategic orientation, executive values, environmental and industry characteristics as well as trust should be included. Second, the addition of performance measures to the model would develop this research further and provide additional insights. This is in line with the premise that e-banking is a means through which users improve their operational efficiency and seek to achieve competitive advantage. Third, given the 'dynamic' and temporal nature of customer value the adoption of a longitudinal approach rather than the cross-sectional methodology employed in this study will enable the stability of the results reported here to be tested over time. Such a design will overcome some of the methodological issues related to the temporal elements of use of e-banking identified earlier in this paper and will account for technological developments and issues related to e-banking life cycle. Fourth, although it is fully acknowledged that value is perceived by customers, examination of the manner in which e-banking services are developed by banks will provide an expanded perspective of the subject matter. This is especially pertinent in efforts to develop value-added propositions within a service that has limited opportunities for differentiation and will offer insight into the role of market orientation in the development of customer value. Fifth, the potential direct effects of risk on behaviour should be examined. Sixth, the study was undertaken in the UK banking services industrial sector. Although this focus affords us contextual control that results in minimisation of unexplained variation it has a negative effect on the generalisability of the reported findings. Consequently, the proposed framework should be replicated within other countries and industries before the stability of the results could be confirmed. Finally, given the potential of common method bias inherent in studies that simultaneously measure antecedents and outcomes of a phenomenon, future research should contain not only self-reporting/perceived measures but also factual behavioural information.

Appendix A

Summary of definitions of value

Zeithaml (1988:14)	"Perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Though what is received varies across consumers (i.e., some may want volume, others high quality, still others convenience) and what is given varies (i.e., some are concerned only with money expended, others with time and effort), value represents a trade-off of the salient give and get components."
Monroe (1991:46)	"A buyer's perception of value represents a trade off between the quality or benefits they perceive in the product relative to the sacrifice they perceive by paying the price."
Anderson et al. (1993:5)	"... we define <i>value in business markets</i> as the perceived worth in monetary units of a set of economic, technical, service and social benefits received by a customer firm in exchange for the price paid for a product offering, taking into consideration the available alternative suppliers' offerings and prices."
Gale (1994:24)	"Value is simply quality ... offered at the right price."
Flint et al. (1997:171)	"The customers' assessment of the value that has been created for them by a supplier given the trade-offs between all relevant benefits and sacrifices in a specific-use situation."
Patterson and Spreng (1997:416)	"... the most popular conceptualisation in marketing, and the one employed in this study, is a functional one, defining value in terms of performance (quality) and price."
Woodruff (1997:142)	"Consumer value is a consumer's perceived preference for, and evaluation of, those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the consumer's goals and purposes in use situations."
Lapierre et al. (1999:237)	"Perceived value is a combination of what customers get in terms of benefits such as quality and what they give away in terms of money, time, and effort. In other words, the evaluation of perceived value includes input from the producer as well as the customer."
Lapierre (2000:124)	"... we concur with the majority of researchers who define customer value in terms of get (benefit) and give (sacrifice) components."
Han and Han (2001:27)	"We define the customer value of Internet Business in terms of <i>the benefits the customer derives in terms of reducing costs</i> ."
Uлага and Chacour (2001:528)	"A value judgement is the customer's assessment of the value that has been created for them by a supplier given the trade-offs between all relevant benefits and sacrifices in a specific-use situation" (Flint et al. 1997).
Flint et al. (2002:103)	"Most authors agree that customer value involves trading off benefits versus sacrifice experiences within use situations ..."
Eggert and Uлага (2002:110)	"... we define customer-perceived value in business markets as the trade-off between the multiple benefits and sacrifices of a supplier's offering, as perceived by the decision-makers in the customer's organisation, and taking into consideration the available alternative suppliers' offerings in a specific use situation."
Beverland and Lockshin (2003:654)	Adopt definition by Woodruff (1997).
Woodall (2003:21)	"Value for the customer (VC) is any demand-side, personal perception of advantage arising out of a customer's association with an organisation's offering, and can occur as reduction in sacrifice; presence of benefit (perceived as either attributes or outcomes); the resultant of any weighted combination of sacrifice and benefit (determined and expressed either rationally or intuitively); or an aggregation, over time, of any or all of these."
Lam et al. (2004:295)	"Customer value can be conceptualised as a comparison of weighted "get" attributes to "give" attributes (Heskett et al., 1994) Customer value is operationalised as a ratio or trade-off between total benefit received and total sacrifices, taking into consideration the available suppliers' offerings and prices (Buzzell and Gale, 1987)."
Menon et al. (2005:3)	"Customer value is conceptualised as being dependent on benefits received and sacrifices made by customers."
Liu (2006:32)	"... customer value for a business service is defined here as an organisational buyer's assessment of the economic, technical, and relational benefits received, in exchange for the price paid for a supplier's offer to competitive alternatives."
Blocker and Flint (2007:250)	Adopt definition by Woodruff (1997).
Cretu and Brodie (2007:232)	Adopt definition by Zeithaml (1988).
Eng (2008:1296)	"On the Internet, customer-perceived value has been broadly defined as the benefit that the customers receive in relation to the total costs (McDougall & Levesque, 2000)."
Gil et al. (2008:922)	Adopt definition by Zeithaml (1988).
Han and Sung (2008:809)	"An industrial buyer's overall appraisal of the net worth of a particular transaction, based on the buyer's assessment of what is received (benefits provided by the transaction) and given (cost of acquisition and utilizing the transaction)."
La et al. (2009:276)	Adopt definition by Monroe (1991).
García-Acerbrón et al. (2010:320)	Adopt definition by Zeithaml (1988).
Blocker (2011:534)	"Customer value in B2B contexts is defined as the customer's perceived trade-off between benefits and sacrifices within relationships (Blocker and Flint, 2007; Uлага and Eggert, 2006a, 2006b)."
Blocker et al. (2011:217)	"Customer value represents the trade-off between benefits and sacrifices that stem from a provider's product and resources which customers believe are facilitating their goals (Uлага and Eggert, 2006a, 2006b; Woodruff 1997)."

Operationalisation of research constructs

Source(s)	Scale items
e-Service quality (Parasuraman et al., 2005)	<p><i>Efficiency</i></p> <p>When we use our e-banking services we have found that the website has a fast response</p> <p>When we want to use our e-banking services it is clear how to login to our account page</p> <p>Once we have passed our e-banking security checks; the website take us directly to our account</p> <p>Our bank's e-banking pages are well laid out</p> <p><i>Fulfilment</i></p> <p>Our e-banking services keep us informed as to when a specific service will be performed</p> <p>Our e-banking services are prompt</p> <p>We have found our e-banking services to be an easy and convenient way of managing our accounts</p> <p>The speed with which our e-banking carries out our transactions has been very helpful to our business</p> <p><i>System availability</i></p> <p>Our e-banking services keep us informed as to when a specific service will be performed</p> <p>Our e-banking services are prompt</p> <p>We have found our e-banking services to be an easy and convenient way of managing our accounts*</p> <p>The speed with which our e-banking carries out our transactions has been very helpful to our business</p>

(continued on next page)

Operationalisation of research constructs (continued)

Source(s)	Scale items
	<p><i>Security</i></p> <p>Making sure that the service is secure is extremely important to us*</p> <p>Our bank has gone a long way to demonstrate the e-banking security of our accounts and transactions made from these accounts</p> <p>Our bank's e-banking services require a number of important security checks before allowing the user access to our accounts</p> <p>Our bank's use of extensive encryption is something that makes us feel very secure when using their e-banking services</p>
Acquisition (Stamoulis et al., 2002; Liao & Cheung, 2002; Laukkanen, 2006; Pikkarainen et al., 2004)	<p>Enabled us to carry out our business more effectively than before</p> <p>Improved our company's overall performance</p> <p>Made carrying out financial transactions much easier than before</p> <p>Made a positive contribution to our company's revenue</p>
Transaction (Ibbotson & Moran, 2003; Pikkarainen et al., 2004; Rotchanakitumnuai & Speece, 2004)	<p>Enabled our company to provide more extensive services</p> <p>Reduced the number of errors made during financial transactions</p> <p>Offered our company greater degree of security in our financial transactions</p> <p>Made a positive change to the quality of financial transactions carried out by our company</p>
In-use (Mukherjee & Nath, 2003; Pikkarainen et al., 2004; Rotchanakitumnuai & Speece, 2004)	<p>Provided our company with extensive reporting facilities</p> <p>Enabled us to have a clear audit trail of our financial transactions</p> <p>Simplified our reconciliation process</p> <p>Made tracking of transactions much easier than before</p>
Redemption (Rotchanakitumnuai & Speece, 2004; Yibin, 2003)	<p>Resulted in improved relationships with our business partners</p> <p>Enabled us to carry out a number of financial transactions that were not possible before</p> <p>Provided us with a number of customisation options that have made using it much easier</p> <p>Enabled us to implement procedures that have improved our company's cash flow</p>
Monetary cost (Altinkemper, 2001; González et al., 2004; Karjaluoto et al., 2002; Sadiq & Shanmugham, 2003)	<p>In order to use our bank's e-banking services we have made a substantial monetary investment</p> <p>Our bank imposes considerable charges in order for us to use their e-banking facilities</p> <p>We have invested extensively in our IT facilities in order to use the e-banking services offered by our bank</p> <p>Use of our bank's e-banking facilities was only possible after considerable investments in suitably competent personnel</p>
Time (Pikkarainen et al., 2004)	<p>Implementation of our bank's e-banking services has resulted in a long learning curve</p> <p>Because our bank's e-banking has a very methodical interface process of using it takes a long time</p> <p>Carrying out transactions using our bank's e-business services takes longer than before because of the various interfaces</p> <p>Because of security procedures login to our e-banking services takes a long time</p>
Effort (Pikkarainen et al., 2004; Rotchanakitumnuai & Speece, 2004; Lassar et al., 2005; Karjaluoto et al., 2002)	<p>We expend a lot of effort in using the e-banking services provided by our bank</p> <p>Due to lack of paper trail of our e-banking, we spend a lot of effort to ensure security of information and confirm transactions</p> <p>Keeping up-to-date with developments in the e-banking services provided by our bank involves considerable effort from our part</p>
Social (Rotchanakitumnuai & Speece, 2004)	<p>In order to effectively use our bank's e-banking services extensive training of our staff is required</p> <p>Use of our bank's e-banking services meant that we now communicate far less frequently with our bank's business manager</p> <p>Lack of personal interaction with our bank's staff because of e-banking services makes us feel just like another account</p> <p>When we use e-banking we get the feeling our bank perceives us as just another active business account</p> <p>Our e-banking services have reduced our normal interaction with our bank's business account manager</p>
Performance risk (Cunningham et al., 2005; Pennathur, 2001)	<p>There is a chance that there will be something wrong (will not work properly) with the e-banking services offered by our bank</p> <p>There are possible risks in the way that our bank's e-banking services operate</p> <p>We are confident that our bank's e-services perform as described</p> <p>We are very certain that our bank's e-banking services work satisfactorily</p>
Financial risk (Cunningham et al., 2005; Pennathur, 2001)	<p>The risk of financial loss when using our bank's e-banking services is high</p> <p>We are concerned that our transactions may be compromised when we use our bank's e-banking services</p> <p>The risk of financial fraud is something we are very worried about when using our bank's e-banking services</p> <p>In terms of long term costs, using our bank's e-banking services is a risk</p>
Psychological risk (Barnes and Corbitt, 2003; Sadiq & Shanmugham, 2003)	<p>There is a chance that using the e-banking facilities offered by our bank will not be considered a symbol of success</p> <p>By using the e-banking facilities offered by our bank there is danger that our status in the market will decline</p> <p>We are concerned that use of the e-banking facilities provided by our bank will have a detrimental effect on the morale of our staff</p> <p>There is danger that using e-banking services will make us look less professional to our suppliers and customers</p>
Satisfaction	<p>Think back to the time when your company started using your bank's e-banking services: Our satisfaction has been ...</p>
Word-of-mouth (Janda et al., 2002; Polatoglu and Ekin, 2001)	<p>If people ask me, I would strongly recommend our bank's e-banking services</p> <p>Our bank can use us as a reference customer for their e-banking services</p> <p>We would be glad to serve as a reference e-banking customer to our bank</p> <p>I have said positive things about our bank's e-banking services to other professional colleagues</p>
Intention to switch (Ibbotson & Moran, 2003)	<p>If it were easy our company will switch to another provider of e-banking services</p> <p>We are continuously looking for alternative providers of e-banking services to replace our current bank</p> <p>Recently we have spent some effort to search for an alternative bank with better e-banking services</p>

Note: * Item removed during scale purification stage.

Scale items – reliability and validity indices

	Number of initial and final scale items		Final scale items	
			Composite reliability	AVE
e-Service quality				
Efficiency	4	4	0.859	0.605
Fulfilment	4	4	0.893	0.676
System availability	4	3	0.859	0.671
Security	4	3	0.872	0.695
Word-of-mouth	4	4	0.869	0.625
Intention to switch	3	2	0.904	0.825

Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Efficiency	0.79																		
Fulfilment	0.76	0.82																	
Availability	0.59	0.59	0.82																
Security	0.62	0.63	0.47	0.83															
Acquisition	0.54	0.60	0.43	0.46	n/a														
Transaction	0.47	0.45	0.43	0.47	0.56	n/a													
Redemption	0.48	0.49	0.46	0.52	0.43	0.59	n/a												
In use	0.44	0.37	0.44	0.35	0.51	0.62	0.59	n/a											
Monetary cost	0.30	0.08	0.14	0.15	0.15	0.35	0.24	0.31	n/a										
Time	-0.03	-0.15	-0.01	0.01	-0.18	0.12	0.07	0.03	0.62	n/a									
Effort	0.07	-0.05	0.09	0.01	-0.06	0.19	0.08	0.21	0.69	0.81	n/a								
Social	-0.16	-0.14	-0.19	-0.15	-0.15	-0.12	-0.18	-0.05	0.34	0.47	0.47	n/a							
Performance	0.29	0.22	0.13	0.25	0.22	0.29	0.29	0.33	0.33	0.32	0.27	0.28	n/a						
Financial	0.17	0.05	0.17	0.06	0.19	0.28	0.15	0.25	0.39	0.41	0.43	0.20	0.31	n/a					
Psychological	0.31	0.22	0.29	0.14	0.26	0.42	0.35	0.44	0.39	0.26	0.34	0.18	0.40	0.25	n/a				
Satisfaction	0.48	0.38	0.34	0.42	0.35	0.37	0.41	0.37	0.19	-0.11	-0.03	-0.26	0.19	0.15	0.29	n/a			
WOM	0.59	0.58	0.43	0.53	0.48	0.41	0.42	0.33	0.12	-0.08	0.01	-0.03	0.28	0.21	0.29	0.46			0.79
Switch	-0.11	-0.09	0.14	-0.09	0.12	0.14	0.10	0.14	0.16	0.24	0.26	0.15	0.05	0.23	0.23	-0.09	0.12	0.12	0.91

Key: 1 = Efficiency; 2 = Fulfilment; 3 = Availability; 4 = Security; 5 = Acquisition; 6 = Transaction; 7 = Redemption; 8 = In-use; 9 = Monetary cost; 10 = Time; 11 = Effort; 12 = Social; 13 = Performance risk; 14 = Financial risk; 15 = Psychological risk; 16 = Satisfaction; 17 = Word-of-mouth; 18 = Intention to switch.

Off diagonals are bivariate correlations, bold italics diagonal are square root of corresponding AVE.

n/a = not applicable because either a single item or a formative measure.

References

- Agarwal, S., & Teas, R. K. (2001). Perceived value: Mediating role of perceived risk. *Journal of Marketing Theory and Practice*, 9(4), 1–13.
- Agarwal, S., & Teas, R. K. (2004). Cross-national applicability of a perceived risk-value model. *The Journal of Product and Brand Management*, 13(4), 242–256.
- Akinci, S., Aksoy, S., & Atilgan, E. (2004). Adoption of Internet banking among sophisticated consumer segments in an advanced developing country. *International Journal of Bank Marketing*, 22(3), 212–232.
- Altinkemper, K. (2001). Bundling e-banking services. *Communications of the ACM*, 44(5), 45–47.
- Anderson, J. C., Jain, D. C., & Chintagunta (1993). Customer value assessment in business markets: A state-of-practice study. *Journal of Business-to-Business Marketing*, 1(1), 3–29.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14(3), 396–402.
- Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least Squares (PLS) approach to causal modelling: Personal computer adoption and use as an illustration. *Technology Studies*, 2(2), 285–309.
- Barnes, S., & Corbitt, B. (2003). Mobile banking: Concept and potential. *International Journal of Mobile Communications*, 1(3), 273–288.
- Barry, J., & Terry, T. S. (2008). Empirical study of relationship value in industrial services. *The Journal of Business and Industrial Marketing*, 23(4), 228–241.
- Baumann, C., Burton, S., Elliott, G., & Kehr, H. M. (2007). Prediction of attitude and behavioural intention in retail banking. *International Journal of Bank Marketing*, 25(2), 102–116.
- Beverland, M., & Lockshin, L. (2003). A longitudinal study of customers' desired value change in business-to-business markets. *Industrial Marketing Management*, 32(8), 653–666.
- Blocker, C. P. (2011). Modeling customer value perceptions in cross-cultural business markets. *Journal of Business Research*, 64(5), 533–540.
- Blocker, C. P., & Flint, D. J. (2007). Customer segments as moving targets: Integrating customer value dynamism into segment instability logic. *Industrial Marketing Management*, 36(6), 810–822.
- Blocker, C. P., Flint, D. J., Myers, M. B., & Slater, S. F. (2011). Proactive customer orientation and its role for creating customer value in global markets. *Journal of the Academy of Marketing Science*, 39(2), 216–233.
- Bontis, N., Booker, L. D., & Serenko, A. (2007). The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry. *Management Decision*, 45(9), 1426–1445.
- Brennan, R., Canning, L. E., & McDowell, R. (2010). *Business-to-business marketing*. London: Sage Publications.
- Bunn, M. D. (1993). Taxonomy of buying decision approaches. *The Journal of Marketing*, 57(1), 38–56.
- Bunn, M. D., Butaney, G. T., & Huffman, N. P. (2001). An empirical model of professional buyers. *Journal of Business-to-Business Marketing*, 8(4), 55–81.
- Buzzell, R. D., & Gale, B. T. (1987). *The PIMS Principles*. New York: The Free Press.
- Carpenter, J. M. (2008). Consumer shopping value, satisfaction and loyalty in discount retailing. *Journal of Retailing and Consumer Services*, 15(5), 358–363.
- Chan, K. W., Yim, C. K., & Lam, S. S. K. (2010). Is customer participation in value creation a double-edged sword? Evidence from professional financial services across cultures. *The Journal of Marketing*, 74(3), 48–64.
- Chang, H. -S., & Hsiao, H. -L. (2008). Examining the causal relationship among service recovery, perceived justice, perceived risk, and customer value in the hotel industry. *Service Industries Journal*, 28(4), 513–528.
- Chin, W.W. (1998). "Issues and opinion on structural equation modeling" MIS Quarterly, March, pp.vii–xvi.
- Chin, W.W. (2003). PLS GRAPH, Version 3. Department of Decision and Information Science: University of Houston, USA.
- Chin, W. W., & Newsted, P. R. (1999). Structural equation modeling analysis with small samples using partial least squares. In R. H. Hoyle (Ed.), *Statistical strategies for small sample research* (pp. 308–341). London: Sage Publications.
- Cretu, A. E., & Brodie, R. J. (2007). The influence of brand image and company reputation where manufacturers market to small firms: A customer value perspective. *Industrial Marketing Management*, 36(2), 230–240.
- Cronin, J. J., Jr., Brady, K. M., & Hult, G. M. T. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environment. *Journal of Retailing*, 76(2), 193–218.
- Cunningham, L., Gerlach, J., & Harper, M. (2005). Perceived risk and e-banking services: An analysis from the perspective of the consumer. *Journal of Financial Services Marketing*, 10(2), 165–178.
- Day, S. G., & Bens, J. K. (2005). Capitalizing on the Internet opportunity. *The Journal of Business and Industrial Marketing*, 20(4–5), 160–168.
- de Ruyter, K., Lemmink, J., Wetzels, M., & Mattson, J. (1997). Carry-over effects in the formation of satisfaction: The role of value in a hotel service delivery process. *Advances in Services Marketing and Management*, 6, 61–77.
- Dewan, R., Freimer, M., & Seidmann, A. (2000). Organizing distribution channels for information good on the Internet. *Management Science*, 46(4), 483–495.

- Diamantopoulos, A., Riefle, P., & Roth, P. K. (2008). Advancing formative measurement models. *Journal of Business Research*, 61(12), 1203–1218.
- Dillman, D. A. (2007). *Mail and Internet surveys: The tailored design method* (2nd ed.). Hoboken, NJ: John Wiley & Sons.
- Dodds, W. B., & Monroe, K. B. (1985). The effect of brand and price information on product evaluations. In E. Hirschman, & M. B. Holbrook (Eds.), *Advances in consumer research*, Vol. 12. (pp. 85–90).
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307–319.
- Doney, P., & Cannon, J. P. (1997). An examination of the nature of trust in buyer seller relationships. *The Journal of Marketing*, 61(2), 35–51.
- Dwyer, F. R., & Tanner, J. F. Jnr (2009). *Business marketing: Connecting strategy, relationships, and learning* (4th edition). New York: McGraw Hill.
- Edwards, R. J. (2001). Multidimensional constructs in organizational behaviour research: An integrative framework. *Organizational Research Methods*, 4(2), 144–192.
- Eggert, A., & Ulaga, W. (2002). Customer perceived value: A substitute for satisfaction in business markets? *The Journal of Business and Industrial Marketing*, 17(2/3), 107–118.
- Eggert, A., Ulaga, W., & Schultz, F. (2006). Value creation in the relationship life cycle: A quasi-longitudinal analysis. *Industrial Marketing Management*, 35(1), 20–27.
- Ellis, N. (2011). *Business to business marketing: Relationships, networks and strategies*. Oxford: Open University Press.
- Ellis, C. S., Scocckley, J., & Henry, M. R. (2011). Making sense of supply disruption risk research: A conceptual framework grounded in enactment theory. *Journal of Supply Chain Management*, 47(2), 65–96.
- Eng, T. -Y. (2005). The effects of learning on relationship value in a business network context. *Journal of Business-to-Business Marketing*, 12(4), 67–101.
- Eng, T. -Y. (2008). E-customer service capability and value creation. *Service Industries Journal*, 28(9), 1293–1306.
- Engelland, B. T., Alford, B. L., & Taylor, R. D. (2001). Caution and precaution on the use of 'borrowed' scales in marketing research. In T. A. Slater (Ed.), *Marketing advances in pedagogy, process and philosophy* (pp. 152–153). New Orleans: Society of Marketing Advances.
- Fiol, L. J. C., Alcañiz, Tena, M. A. M., & García, J. S. (2009). Customer loyalty in clusters: Perceived value and satisfaction as antecedents. *Journal of Business-to-Business Marketing*, 16(3), 276–316.
- Fiol, L. J. C., Alcañiz, Tena, M. A. M., & García, J. S. (2011). Multidimensional perspective of perceived value in industrial clusters. *The Journal of Business and Industrial Marketing*, 26(2), 132–145.
- Fishbein, M., & Ajzen, I. (1975). *Beliefs, attitude, intention and behavior: An introduction to theory and research*. Reading, Mass.: Addison-Wesley.
- Flint, D. J., Woodruff, R. B., & Gardial, S. F. (1997). Customer value change in industrial marketing relationships. *Industrial Marketing Management*, 26(2), 163–175.
- Flint, D. J., Woodruff, R. B., & Gardial, S. F. (2002). Exploring the phenomenon of customers' desired value change in a business to business context. *The Journal of Marketing*, 66(4), 102–117.
- Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research*, 19(4), 440–452.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Forsythe, S. M., & Shi, B. (2003). Consumer patronage and risk perceptions in Internet shopping. *Journal of Business Research*, 56(11), 867–875.
- Gale, B. T. (1994). *Managing customer value: Creating quality and service that customers can see*. New York, NY: The Free Press.
- Gallarza, M. G., & Saura, I. G. (2006). Value dimensions, perceived value, satisfaction and loyalty: An investigation of university students' travel behaviour. *Tourism Management*, 27(3), 437–452.
- García-Acerbrón, C., Vázquez-Caselles, R., & Iglesias, V. (2010). The effect of perceived value and switching barriers on customer price tolerance in industrial energy markets. *Journal of Business-to-Business Marketing*, 17(4), 317–335.
- Gil, I., Berenguer, G., & Cervera, A. (2008). The roles of service encounters, service value, and job satisfaction in achieving customer satisfaction in business relationships. *Industrial Marketing Management*, 37(8), 921–939.
- González, M. E., Quesada, G., Picado, F., & Eckelman, C. A. (2004). Customer satisfaction using QFD: An e-banking case. *Managing Service Quality*, 14(4), 317–330.
- Good, J. D., & Schultz, J. R. (2002). e-Commerce strategies for business-to-business service firms in the global environment. *American Business Review*, 20(2), 111–118.
- Grabner-Kräuter, S., & Faullant, R. (2008). Consumer acceptance of Internet banking: The influence of Internet and trust. *International Journal of Bank Marketing*, 26(7), 483–504.
- Graf, A., & Maas, P. (2008). *Customer value from a customer perspective: A comprehensive review*. Working papers on risk management and insurance no. 52. : Institute of Insurance Economics, University of St.Gallen.
- Hackman, D., Gundergan, S. P., Wang, P., & Daniel, K. (2006). A service perspective on modeling intentions of on-line purchasing. *Journal of Services Marketing*, 20(7), 459–470.
- Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding Statistics*, 3(4), 283–297.
- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). New York, NY: Prentice Hall.
- Han, J., & Han, D. (2001). A framework for analyzing customer value of internet business. *Journal of Information Technology Theory and Application*, 3(5), 25–38.
- Han, S. -L., & Sung, H. -S. (2008). Industrial brand value and relationship performance in business markets – A general structural equation model. *Industrial Marketing Management*, 37(7), 807–818.
- Heskett, James, L., Jones, T. O., Loveman, G. L., Sasser, E. W., & Schlesinger, L. A. (1994). "Putting the Service-Profit Chain to Work". *Harvard Business Review*, 72(2), 164–174.
- Ho, S. S. M., & Ng, V. T. F. (1994). Customers' risk perceptions of electronic payment systems. *International Journal of Bank Marketing*, 12(8), 26–38.
- Holbrook, M. B. (1994). The nature of customer value: An axiology of services in the consumption experience. In R. T. Rust, & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice* (pp. 21–71). Thousand Oaks, CA: Sage Publications.
- Homburg, C., & Kuester, S. (2001). Towards an improved understanding of industrial buying behaviour: Determinants of the number of suppliers. *Journal of Business-to-Business Marketing*, 8(2), 5–29.
- Hsu, S. -H. (2008). Developing an index for online customer satisfaction: Adaptation of American Customer Satisfaction Index. *Expert Systems with Applications*, 34(4), 3033–3042.
- Ibbotson, P., & Moran, L. (2003). E-banking and the SME/bank relationship in Northern Ireland. *International Journal of Bank Marketing*, 21(2), 94–110.
- Janda, S., Trocchia, P. J., & Gwinner, K. P. (2002). Consumer perceptions of internet retail service quality. *International Journal of Service Industry Management*, 13(5), 412–431.
- Jarvis, C. B., Mackenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *The Journal of Consumer Research*, 30(2), 199–218.
- Jayawardhena, C. (2010). The impact of service encounter quality in service evaluation: Evidence from a business-to-business context. *The Journal of Business and Industrial Marketing*, 25(5), 338–348.
- Johnson, E. M., & Whang, S. (2002). e-Business and supply chain management: An overview and framework. *Production and Operations Management*, 11(4), 413–423.
- Karjaluoto, H., Mattila, M., & Pentto, T. (2002). Factors underlying attitude formation towards online banking in Finland. *The International Journal of Bank Marketing*, 20(6), 261–272.
- Keh, H. T., & Sun, J. (2008). The complexities of perceived risk in cross-cultural services marketing. *Journal of International Marketing*, 16(1), 120–146.
- Kleijnen, M., de Ruyter, K., & Wetzels, M. (2007). An assessment of value creation in mobile service delivery and the moderating role of time consciousness. *Journal of Retailing*, 83(1), 33–46.
- Kothandaraman, P., & Wilson, D. T. (2001). The future of competition: Value-creating networks. *Industrial Marketing Management*, 30(4), 379–389.
- Kumar, A., & Grisaffe, D. B. (2004). Effects of extrinsic attributes on perceived quality, customer value, and behavioral intentions in b2b setting: A comparison across goods and service industries. *Journal of Business-to-Business Marketing*, 11(4), 43–74.
- La, V., Patterson, P., & Styles, C. (2009). Client-perceived performance and value in professional B2B services: An international perspective. *Journal of International Business Studies*, 40(2), 274–300.
- Lam, S. Y., Shankar, V., Erramilli, M. K., & Murthy, B. (2004). Customer value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. *Journal of the Academy of Marketing Science*, 32(3), 293–311.
- Lapierre, J. (2000). Customer-perceived value in industrial contexts. *The Journal of Business and Industrial Marketing*, 15(2/3), 122–140.
- Lapierre, J., Filiatrault, P., & Chebat, J. -C. (1999). Value strategy rather than quality strategy: A case of business-to-business professional services. *Journal of Business Research*, 45(2), 235–246.
- Lassar, W. M., Manolis, C., & Lassar, S. S. (2005). The relationship between consumer innovativeness, personal characteristics, and online banking adoption. *International Journal of Bank Marketing*, 23(2), 176–199.
- Laukkanen, T. (2006). Customer perceived value of e-financial services: A means-end approach. *International Journal of Electronic Finance*, 1(1), 5–17.
- Lee, Y. -W., & Bellman, S. (2008). An augmented model of customer loyalty for organizational purchasing of financial services. *Journal of Business-to-Business Marketing*, 15(3), 290–322.
- Lei, J., de Ruyter, K., & Wetzels, M. (2008). Consumer responses to vertical service line extensions. *Journal of Retailing*, 84(3), 268–280.
- Liao, Z., & Cheung, M. T. (2002). Internet-based e-banking and consumer attitudes: An empirical study. *Information Management*, 39(4), 283–295.
- Lin, C. -H., Sher, P. J., & Shih, H. -Y. (2005). Past progress and future directions in conceptualizing customer perceived value. *International Journal of Service Industry Management*, 16(4), 318–336.
- Lindgreen, A., & Wynstra, F. (2005). Value in business markets: What do we know? Where are we going? *Industrial Marketing Management*, 34(7), 732–748.
- Liu, A. H. (2006). Customer value and switching costs in business services: Developing exit barriers through strategic value management. *The Journal of Business and Industrial Marketing*, 21(1), 30–37.
- Liu, A. H., Leach, M. P., & Bernhardt, K. L. (2005). Examining customer value perceptions of organizational buyers when sourcing from multiple vendors. *Journal of Business Research*, 58(5), 559–568.
- Mathieson, K., Peacock, E., & Chin, W. W. (2001). Extending the technology acceptance model: The influence of perceived user resources. *DATABASE for Advances in Information Systems*, 32(3), 86–112.
- Mathwick, C., Malhotra, N., & Rigdon, E. (2001). Experiential value: Conceptualization, measurement and application in the catalog and Internet shopping environment. *Journal of Retailing*, 77(1), 39–56.
- McDougall, G. H. G., & Levesque, T. (2000). Consumer satisfaction with services: Putting perceived value into the equation. *Journal of Services Marketing*, 14(5), 392–410.
- Menon, A., Homburg, C., & Beutin, N. (2005). Understanding customer value in business-to-business relationships. *Journal of Business-to-Business Marketing*, 12(2), 1–38.
- Michel, D., Naudé, P., Salle, R., & Valla, J. -P. (2003). *Business-to-business marketing* (2nd ed.). Basingstoke: Palgrave Mcmillan.
- Mitchell, V. W. (1998). Segmenting purchasers of organisational services: A risk-based approach. *Journal of Services Marketing*, 12(2/3), 83–97.
- Molinari, L. K., Abratt, R., & Dion, P. (2008). Satisfaction, quality and value and effects on repurchase and positive word-of-mouth behavioural intentions in a B2B services context. *Journal of Services Marketing*, 22(5), 363–373.

- Monroe, K. B. (1991). *Pricing: Making profitable decisions*. New York, NY: McGraw-Hill Book Company.
- Montoya-Weiss, M. M., Voss, B. G., & Grewal, D. (2003). Determinants of online channel use and overall satisfaction with a relational, multichannel service provider. *Journal of the Academy of Marketing Science*, 31(4), 448–458.
- Mukherjee, A., & Nath, P. (2003). A model of trust in online relationship banking. *The International Journal of Bank Marketing*, 21(1), 5–15.
- Oh, H. (1999). Service quality, customer satisfaction, and customer value: A holistic perspective. *International Journal of Hospitality Management*, 18(1), 67–82.
- Olaru, D., Purchase, S., & Peterson, N. (2008). From customer value to repurchase intentions and recommendations. *The Journal of Business and Industrial Marketing*, 23(8), 554–565.
- Overby, J. W., & Lee, E. -J. (2006). The effects of utilitarian and hedonic online shopping value on consumer preference and intentions. *Journal of Business Research*, 59(10–11), 1160–1166.
- Palmatier, R. W. (2008). Interfirm relational drivers of customer value. *The Journal of Marketing*, 72(4), 76–89.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-Qual: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233.
- Park, J. E., & Bunn, M. D. (2003). Organizational memory: A new perspective on the organizational buying process. *The Journal of Business and Industrial Marketing*, 18(3), 237–257.
- Patterson, P. G., & Spreng, R. A. (1997). Modelling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, services context: An empirical examination. *International Journal of Service Industry Management*, 8(5), 414–434.
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), 101–134.
- Pennathur, A. K. (2001). 'Clicks and bricks': e-risk management for banks in the age of the Internet. *Journal of Banking and Finance*, 25(11), 2103–2123.
- Peter, J. P., Churchill, G. A., & Brown, T. J. (1993). Caution in the use of difference scores in consumer research. *The Journal of Consumer Research*, 19(4), 655–662.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahlila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model. *Internet Research*, 14(3), 224–235.
- Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of Internet banking services. *International Journal of Bank Marketing*, 10(4), 156–165.
- Ravald, A., & Grönroos, C. (1996). The value concept and relationship marketing. *European Journal of Marketing*, 30(2), 19–30.
- Rindfleisch, A., & Heide, J. B. (1997). Transaction cost analysis: Past, present and future applications. *The Journal of Marketing*, 61(4), 30–54.
- Rossiter, J. R. (2002). The C-OAR-SE procedure for scale development in marketing. *International Journal of Research in Marketing*, 19(4), 305–335.
- Rotchanakitumnuai, S., & Speece, M. (2004). Corporate customer perspectives on business value of Thai internet banking. *Journal of Electronic Commerce Research*, 5(4), 270–286.
- Sadiq, S. M., & Shanmugham, B. (2003). E-banking and customer preferences in Malaysia: An empirical investigation. *Information Sciences*, 150(3/4), 207–217.
- Sánchez-Fernández, R., & Iniesta-Bonillo, M.Á. (2007). The concept of perceived value: A systematic review of the research. *Marketing Theory*, 7(4), 427–451.
- Shamdasani, P., Mukherjee, A., & Malhotra, N. (2008). Antecedents and consequences of service quality in consumer evaluation of self-service internet technologies. *Service Industries Journal*, 28(1), 117–138.
- Sirohi, N., McLaughlin, W. E., & Wittink, R. D. (1998). A model of consumer perceptions and store loyalty intentions for a supermarket retailer. *Journal of Retailing*, 74(2), 223–245.
- Snoj, B., Korda, A. O., & Mumel, D. (2004). The relationships among perceived quality, perceived risk and perceived product value. *The Journal of Product and Brand Management*, 13(3), 156–167.
- Spiteri, J. M., & Dion, P. A. (2004). Customer value, overall satisfaction, end-user loyalty, and market performance in retail intensive industries. *Industrial Marketing Management*, 33(8), 675–687.
- Stamoulis, D., Kanellis, P., & Martakos, D. (2002). An approach and model for assessing the business value of e-banking distribution channels: Evaluation as communication. *International Journal of Information Management*, 22(4), 247–261.
- Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1999). The role of perceived risk in the quality-value relationship: A study in a retail environment. *Journal of Retailing*, 75(1), 77–105.
- Tan, S. J. (1999). Strategies for reducing consumers' risk aversion in Internet shopping. *Journal of Consumer Marketing*, 16(2), 163–180.
- Teas, R. K., & Agarwal, S. (2000). The effects of extrinsic product cues on consumers' perceptions of quality, sacrifice, and value. *Journal of the Academy of Marketing Science*, 28(2), 278–290.
- Tenenhaus, M., Vinzi, E. V., Chatelin, Y. -M., & Carlo, L. (2005). PLS path modeling. *Computational Statistics & Data Analysis*, 48(1), 159–205.
- Ullaga, W., & Chacour, S. (2001). Measuring customer-perceived value in business markets. *Industrial Marketing Management*, 30(6), 525–540.
- Ullaga, W., & Eggert, A. (2005). Relationship value in business markets: The construct and its dimensions. *Journal of Business-to-Business Marketing*, 12(1), 73–99.
- Ullaga, W., & Eggert, A. (2006). Relationship value and relationship quality. *European Journal of Marketing*, 40(3/4), 311–327.
- Ullaga, W., & Eggert, A. (2006). Value-based differentiation in business relationships: Gaining and sustaining key supplier status. *The Journal of Marketing*, 70(1), 119–136.
- Webb, L. K. (2002). Managing channels of distribution in the age of electronic commerce. *Industrial Marketing Management*, 31(2), 95–102.
- Wetzels, M., Oederkerken-Schröder, G., & van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 33(1), 177–195.
- Whittaker, G., Ledden, L., & Kalafatis, S. P. (2007). A re-examination of the relationship between value, satisfaction and intention in business services. *Journal of Services Marketing*, 21(5), 345–357.
- Wilson, D. T. (1995). An integrated model of buyer-seller relationships. *Journal of the Academy of Marketing Science*, 23(4), 335–345.
- Wilson, D. T. (2000). Why divide consumer and organizational buyer behaviour? *European Journal of Marketing*, 34(7), 780–796.
- Wong, D. H., Loh, C., Yap, K. B., & Bak, R. (2009). To trust or not to trust: The consumer's dilemma with E-banking. *Journal of Internet Business*(6), 1–27.
- Woodall, T. (2003). Conceptualising 'value for the customer': An attributional, structural and dispositional analysis. *Academy of Marketing Science Review*, 12, 1–31.
- Woodruff, R. B. (1997). Customer value: The next source of competitive advantage. *Journal of the Academy of Marketing Science*, 25(2), 139–153.
- Yang, Z., & Peterson, R. T. (2004). Customer perceived value, satisfaction, and loyalty: The role of switching costs. *Psychology and Marketing*, 21(10), 799–822.
- Yibin, M. (2003). *E-banking: Status, trends, challenges and policy implications*. The World Bank, Harvard University, November 2003, Paper presented at CBRC Seminar, The Development and Supervision of Ebanking Shanghai, Nov 25–26.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *The Journal of Marketing*, 52(3), 2–22.
- Zhao, A. L., Koenig-Lewis, N., Hanmer-Lloyd, S., & Ward, P. (2010). Adoption of internet banking services in China: Is it all about trust? *International Journal of Bank Marketing*, 28(1), 7–26.
- Zsidisin, A. G. (2003). Managerial perceptions of supply risk. *Journal of Supply Chain Management*, 39(1), 14–25.

Frank Faroughian graduated MBA from Henley Management College and DBA from Kingston University. He is currently Vice President of Business Development at American Technology Enterprise Services (AmeriTES) with specialized experience in financial products (capital markets), enterprise business architecture, IT, programme/project management and operations.

Stavros P. Kalafatis is Professor of Business Marketing at Kingston Business School, Kingston University. His research focuses on business segmentation, design of channels of distribution, relationship marketing and value creation. His research has been published, amongst others, in *European Journal of Marketing*, *Industrial Marketing Management*, *Journal of Business Research* and *Journal of Marketing Management*.

Lesley Ledden is a Senior Lecturer in Marketing at Kingston Business School, Kingston University. Her research interests focus on consumer value and the marketing of higher education. Her PhD investigated how perceptions of value and the related antecedent and outcome relationships change over time. Her research has been published in, amongst others, *Journal of Marketing Management* and *Journal of Business Research*.

Phillip Samuel is Emeritus Professor of Business Economics at Kingston Business School, Kingston University. His research focus is business-to-business relationships and firm performance. His research has been published in *Industrial Marketing Management*, *Journal of Marketing Management* and *Journal of Small Business and Enterprise Development*.

Markos H. Tsogas is Lecturer of International Marketing at the Dept of Business Administration, University of Piraeus. His research interests are evolving around international market selection and segmentation, international marketing research, industrial and tourism marketing and value creation. Research of his has been published in international journals such as *Industrial Marketing Management*, *Journal of Consumer Marketing*, *Journal of Business and Industrial Marketing* and *International Journal of Market Research*.