CONSUMERS' RESISTANCE TO DISCONTINUING A FAMILIAR TECHNOLOGY, THE PAPER BILL

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Abstract

That most consumers adopt online bill payment without adopting electronic bill presentment has long puzzled banks, organizations and academicians. Previous research had not considered that the origins of behaviours involving resistance to giving up an existing technology may have emerged from different beliefs and evaluations than the behaviour of resistance to adopting an innovation. The purpose of this research was to explore the behaviour of resistance to discontinuing an existing dominant technology in the face of an alternative innovation using the paper bill as the example of the existing technology.

To study resistance to discontinuing the paper bill in the face of the electronic bill, this dissertation reconceptualises the paper bill as an artefact, thereby broadening the dimensions of its evaluation. A new perspective for exploring consumers' behaviour was proposed. Rather than labelling consumers' inaction in the face of an innovation as non-adoption, resistance to innovation adoption or *status quo* behaviour, this dissertation identifies the behaviour as resistance to discontinuing an existing dominant technology. The Model of Resistance to Discontinuing the Paper Bill was proposed and tested. As part of model development, new constructs were developed and tested.

Conceptualization of the paper bill as a multi-dimensional artefact proved to be well-founded. When evaluated based on aesthetic, symbolic and utilitarian dimensions, the paper bill was found to serve two key roles for consumers. The paper bill was found to be relevant not only during the payment transaction but at all stages during the consumers' financial management process as a way for consumers to maintain control

over their financial information. Moreover, the bill takes on an even larger role in helping consumers to maintain their feeling of confidence when dealing with banks and organizations in problem resolution situations. Data from 850 online bill payers were analyzed using Structural Equation Modeling. The results indicated that the final Model of Resistance to Discontinuing the Paper Bill was a good fitting model with a majority of the hypotheses supported. Implications for academicians, practitioners and government are presented along with study limitations.

Acknowledgement

When I began my PhD, I chose as my inspirational image, Mount Everest, the world's highest mountain. Just like those who take on the mountain, a student cannot obtain a PhD by climbing solo. Yet the student must be self-propelled, making the long ascent under her own power. Analogous to an experienced Sherpa on Mount Everest, a great supervisor starts the journey with the student, by leading the way. Part way up the mountain, the supervisor allows the student to catch up and they walk alongside each other, even when the going gets tough and the summit is still a long way off in the distance. Finally, as the summit comes into view, the supervisor falls back to walk behind the student, still supportive but now propelling the student forward to think and write harder than they ever have before. I was fortunate to have such a supervisor.

It would be difficult to overstate my gratitude to my thesis supervisor, Dr. Louise Heslop. Her abiding commitment to her students and teaching has been an inspiration to me. Her enthusiasm, her love of research and her ability to embrace new ideas has helped to shape this dissertation, and will influence my thinking for years to come. She supported me throughout my research with her experience and knowledge while allowing me the room to work in my own way as I made my way to the top of the mountain. I am grateful to her for her supervision, mentorship and friendship. Professor Heslop has had an immense impact on my personal and academic evolution. For that and much more, I offer my heartfelt thanks to her.

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1. INTRODUCTION

Predictions of the 'Paperless Society' began in 1975 (Business Week, 1975) and continue unabated (Liu & Stork, 2000, Silverman, 2009). Speculations have been made that consumers' continued desire for paper documents is largely a function of the consumers' chronological age, habit (Bielshi, 2003), or the desire to maintain *status quo* behaviour (Zaltman & Duncan, 1977). Consumers' behaviour of printing out on paper information received electronically has been considered a transitional behaviour on the way to the acceptance and use of electronic-only information (Jokinen, 2006). Regardless of the accuracy of these assumptions, little theoretical or empirical work with consumers has been conducted on why they continue to use paper, or alternately worded, resist giving up paper. This dissertation will address this issue in the context of bill presentment.

Electronic bill payment and presentment (EBPP) was the first system to attempt to replace the function of the paper bill and statement in providing financial information to the consumer. During the initial period of availability of EBPP systems (beginning in 1996), banks and other organizations focused their persuasive efforts on convincing consumers to adopt online bill payment and presentment as part of a range of online banking services (Crone, 1998, Orr, 1998). Banks and other organizations may have assumed that once the consumer had adopted electronic bill payment, the requirement for the presentation of financial information on paper would disappear (Andreeff et al., 2001). Subsequently, banks and organizations have discovered that very few of those consumers who adopted electronic bill payment, have adopted electronic bill presentment (Stefandis, 2002). Today, despite the money spent and effort made by organizations and

banks to convince online consumers to stop receiving paper bills and statements, little progress has been made in increasing consumers' acceptance of electronic-only bill presentment (Nader & Lintell, 2008).

Consumers fully adopt EBPP when they agree to allow a bill to be delivered and paid over the internet only. In fully adopting EBPP consumers discontinue receiving the paper bill from the organization or printing the electronic bill on paper. Sixty-three percent of Canadian online consumers use online bill payment for at least one of their bills (Statistics Canada, 2008). However, less than five percent of consumers who pay bills online have adopted electronic bill presentment (Nader & Lintell, 2008). Online bill payers are those who have adopted both online banking and the specific transaction of online bill payment (Schuh & Stavins, 2009).

Online bill payers exhibit at least four behaviours toward paper and electronic bill presentment: (1) continue to receive the paper bill and reject electronic bill presentment, (2) continue to receive the paper bill and (partially) adopt electronic bill presentment (this is only observed when the specific EBPP system allows a consumer to receive both an electronic and paper bill), (3) adopt electronic bill presentment but print the paper bill using their own computer, or (4) discontinue using the paper bill and adopt electronic bill presentment. The last behaviour is considered to be full adoption of the innovation of e-presentment where adoption is "making full use of an innovation as the best course of action available" (Rogers, 2003). The other three behaviours will not be studied as resistance to adopting or non-adoption of electronic presentment, but as the behaviour of resistance to discontinuing paper bills.

Consumers who have adopted online bill payment have been described as innovative consumers (Sarel & Marmorstein, 2003). However, most of these 'innovative consumers' have not extended their innovativeness to the full use of electronic presentment. The apparently irrational and inconsistent behaviour of adopting online bill payment without adopting electronic bill presentment and/or, among some consumers, of adopting electronic bill presentment without suppressing paper bills suggests that the behaviour involving resistance to giving up an existing technology may be a behaviour that develops from different beliefs and evaluations rather than the behaviour of resistance to adopting a new technology that has been studied among non-innovators. Moreover, Rogers (2003) and other researchers (Ahluwalia, 2000; Eagly & Chaiken, 1993; Ram, 1987) would conclude that consumers who resist the adoption of an innovation are being rational and consistent in their attitudes, i.e., these consumers are acting in ways consistent with their attitudes to the innovation. Therefore, presumably, these researchers would believe the same about the resistance of consumers to discontinuing an existing technology.

Consumers adopt and continue to use innovations that improve their performance in a given task (Rogers, 2003). Consumers' adoption attitudes and behaviours have received extensive research attention while consumers' resistance to adoption has received relatively less attention (Dunphy & Herbig, 1995). Researchers have explored the factors that lead to adoption or resistance to an innovation, the processes through which adoption or non-adoption take place, the different stages of adoption, and the issues and relationships pertaining to adoption (Ram & Sheth, 1989; Rogers, 2003; Tornatzky & Klein, 1982). The few studies conducted focusing on electronic bill presentment and

using attitude-behaviour frameworks have not led to satisfactory explanations of consumer attitudes and behaviour associated with electronic bill presentment.

Researchers' exploration of consumers' continued use of an innovation has been limited but has been identified in the Information Technology and Information Systems (IT/IS) literature as important. Exploration of discontinuance has been limited to studying an innovation that was adopted and then discontinued in a relatively short time frame after its adoption, rather than studying an existing technology that had been used a long time and was given up in order to adopt an innovation (Gokhale & Narayanaswamy, 2006; Parthasarathy & Bhattacharjee, 1998).

Until now, no theoretical framework has been developed or tested to evaluate consumers' resistance to discontinuing paper. To understand the behaviour of resistance to giving up paper, this research explores the theoretical issue of behaviour of resistance to discontinuing an existing technology with paper bills and statements used as the example of the resistance behaviour. Researchers who investigate innovation adoption have not been concerned with the attitudes and behaviours of consumers related to discontinuing an existing technology. Moreover, researchers conceptualized consumers' attitudinal and behavioural resistance to innovation adoption as simply resistance to the innovation. Researchers have not considered that consumers' resistance attitudes and behaviours may also come as a reaction to discontinuing the existing technology. When deciding to adopt a new technology, that is, an innovation, often consumers may also be making a decision about discontinuing the existing technology.

Non-adoption of an innovation, resistance to adopting an innovation and *status quo* behavior appear to an observer as the same behaviour, i.e. taking no action to adopt the

innovation (Dunphy & Herbig, 1995; Rogers, 2003). However, the attitudes associated with each of non-adoption, resistance to adopting an innovation and status behaviour have been found to be quite different even though the behavioural outcome is the same. Non-adoption has been described as the consideration of adopting an innovation but then deciding not to adopt it (Rogers, 2003). Behavioural resistance to innovation adoption has been described as an adverse reaction (Hirschheim and Newman 1988), opposition to a perceived change (Markus 1983) or as the reluctance to make the changes imposed by innovation (Ram, 1997). *Status quo* behaviour has been described as “doing nothing” when consumers are aware that a decision to change behaviour is available (Robertson & Wind 1980; Samuelson & Zeckhauser, 1998).

In the situation of electronic bill payment and presentment, consumers who pay bills online cannot be described as having made a decision not to adopt, resistant to innovation adoption nor as “doing nothing.” Consumers who pay bills online have demonstrated their ability to simultaneously adopt an innovation, online bill payment, while at the same time demonstrating resistance to giving up paper bills. Moreover, these consumers do not just retain their existing attitudes, as would be the case for status quo attitudes and behaviour, but seem to have developed attitudes toward the paper bill that may be distinct from attitudes relevant to online bill payment adoption and use. Some of the consumers’ attitudes toward the paper bill may pre-date electronic bill payment and presentment, and other attitudes may have developed as a result of the consumer using electronic bill payment systems.

Rather than exploring non-adoption, resistance to adoption or status quo behaviour in the face of an innovation, this research examines the consumers’ resistance to

discontinuing the use of an existing dominant technology with a view to developing a better understanding of the constructs that may also be relevant to innovation adoption. Resistance to discontinuing the use of an existing technology can be distinguished from non-adoption, resistance to adoption and *status quo* behaviour when: (1) consumers are aware of and have the means to access the innovation that could replace the technology, (2) they have already demonstrated an analogous adoption behaviour, (3) the technology maintains the utilitarian functions it always had and develops new utilitarian functions that it did not have before the innovation was introduced, and (4) where the percentage of ‘innovation only’ adoption in the target population remains small over many years.

This study is aimed at providing an improved explanation of why consumers who pay bills online resist giving up paper bills, credit card statements and bank account statements. Moreover, the introduction of an alternative conceptualization and explanation of consumers’ resistance behaviour as the “Behaviour of Resistance to Discontinuing Using an Existing Technology” may provide an improved understanding of a variety of consumer behaviours.

Four major theoretical contributions are made by this study through:

- a reconceptualization of paper bills, credit card statements and bank account statements as artefacts, thereby broadening their evaluation to include utilitarian, functional and symbolic dimensions;
- a focus on the important but overlooked perspective of consumers’ resistance to discontinuing an existing and dominant technology when an alternative replacement innovation is available;

- the development of the Resistance to Discontinuing the Paper Bill Framework by adapting the Composite Attitude-Behaviour Framework (Eagly and Chaiken, 1993);
- the delineation and operationalization of the constructs relevant in EBPP.

In addition to its theoretical contributions, the study contributes empirically in four ways:

- provides the first in-depth research of resistance to discontinuing an existing technology;
- tests an empirical model of resistance to discontinuing an existing technology in the face of an alternate technology;
- assesses the model in the context of EPBB with a large sample of ‘innovative’ respondents (based on self-reported use of electronic bill payment);
- tests the constructs and measures relevant to resistance to discontinuing a paper bill in the situation of EBPP.

Chapter 2, the literature review, highlights the relevant theory used to develop the constructs and framework tested in this research. The hypotheses and the framework tested are discussed in chapter 3. The research method is discussed in chapter 4. Chapter 5 includes the results of the analysis. Chapter 6 discusses the results and presents conclusions of the research. Chapter 7 presents the benefits of this research to academics, practitioners and government, the limitations of the research, and suggestions for future research.

2. LITERATURE REVIEW AND DEVELOPMENT OF THE RESEARCH FRAMEWORK

The purpose of this study is to improve the explanation of why consumers who pay bills online are resistant to giving up paper bills. To simplify the text, the word ‘bill’ is meant to include ‘the bill, credit card statement and bank account statement’ and the term ‘banking method’ is used to identify ‘a banking technology or payment method.’ This study develops and tests a theoretical framework of resistance to discontinuing an existing dominant technology.

The literature review presents the theory germane to the development of the constructs and framework tested in this research. The literature review is presented in five sections:

- Section 2.1 discusses the conceptualization of the paper bill and bank account statement as a multi-dimensional artefact.
- Section 2.2 provides an overview of innovation theory and its use in the adoption of banking methods, the key frameworks used in innovation adoption, the characteristics of innovations and how these influence the attitudes toward adoption, and the predictive value of ‘Innovativeness.’
- Section 2.3 provides an overview of the theory relevant to the discussion of resistance including attitude change, resistance to change as a consumer characteristic, and attitudinal and behavioural resistance to adopting an innovation.
- Section 2.4 outlines the Composite Behaviour-Attitude Framework (Eagly & Chaiken, 1993), the rationale for its selection as the base for the study framework,

and the modifications made to it to create the Framework of Resistance to Discontinuing the Paper Bill.

- Section 2.5 discusses the major constructs (“Habit,” “Attitude Toward the Object,” “Utilitarian Outcomes,” “Normative Outcomes” and “Self-Identity Outcomes”) of the framework, their relationships, and their roles as predictors of the “Attitude of Resistance to Discontinuing a Behaviour,” “Intention to Resist Discontinuing a Behaviour” and “Behaviour of Resistance to Discontinuing.”

2.1 Conceptualizing the Paper Bill as an Artefact

The key purpose of the paper bill for banks and organizations is to provide information to consumers about their financial obligations (Bayout, 2002). Electronic bill payment and presentment was the first system to attempt to replace the function of the paper bill in providing financial information to the consumer in their homes. The electronic bill includes the same information as the paper bill. However, the electronic bill has failed to achieve a wide-spread exclusive adoption as evidenced by consumers continued use of the paper bill. If the provision of financial information had been the sole purpose of the paper bill for consumers, consumers who pay bills online would likely have adopted electronic presentment along with electronic payment. Moreover, the continued resistance to discontinuing the paper bill suggest that it serves other functions for the consumer. In order to develop a more comprehensive understanding of the paper bill, the paper bill was conceptualized in this research as an artefact.

Artefacts have different meanings depending on the research discipline in which they are discussed and tested. In the IT/IS literature, artefacts are considered to be

physical manifestations of how information is represented in the cognitive system (Perry, 2003 p. 212) and may provide evidence of how people organize and structure their tasks (Rogers et al. 2002). Under this conceptualization of an artefact, the piece of paper on which the information was printed would not be considered to have any distinct and additional meaning for the user. Therefore, the piece of paper could be discarded as useless after the transfer of the information and processes required to perform a specific task to an electronic system. In EBPP systems, consumers have all the information and processes they require to perform the task of bill payment. Yet, many consumers who pay bills online continue to receive the paper bill and take no action to discontinue receiving the bill when the option is presented to them.

Material culture literature considers artefacts as cues in the social and physical environment in which people operate. Two major conceptualizations of a cue are as a signal for action or as a node for information about an object (Keller, 2003). Artefacts as cues has been used in understanding the role of physical artefacts in organizational settings (Gioia et al. 1994) and in consumers' assessment of the quality and level of service they might expect in a retail environment (Bitner, 1992). Artefacts interact with the senses by affecting inferences and responses. Artefacts operate in a behavioural system which has a set of activities and processes (Rathje & Schiffer, 1982). Moreover, through direct or indirect use of them (Chisnall, 1985), artefacts give the user experience and expectations of how they will behave (Schiffer, 1999).

Evaluation of the paper bill as an artefact allows for a more elaborate and multi-dimensional discussion of the roles that it serves for consumers. Artefacts have been shown to have three dimensions: aesthetics, symbolism, and instrumentality (Rafaeli &

Vilnai-Yavetz, 2004). These three dimensions and their relevance to paper bills are discussed in the next three subsections.

2.1.1. Aesthetics

In the literature of design and human factors engineering, aesthetics is defined as the sensory perceptions associated with artefacts. In the case of paper, a subset (visual, tactile, and haptic) of the six sensory systems (Wickens et al., 2004) provides the input that delivers information (Peck & Childers, 2003), risk assessment (Schiffer, 1999) and the assurance of the reality (Rathje & Schiffer, 1982) to the consumer.

Aesthetic responses may be derived from the design and sensory properties of the product rather than its performance or functional attributes (Bloch, 1995). Doyle and Bottomley (2006) demonstrated that visual information, such as the text font used to present the brand name, had the ability to alter the brand associations due to the meaning that consumers associated with a particular font. Other research conducted by Peck and Childers (2003) demonstrated the importance of haptic information to consumers in judging product quality when the quality of the product varied depending on the texture, hardness, temperature and weight of the product. Consumers who were not allowed to touch the product were found to have less confidence in their judgment about the product's quality.

In the same way as aesthetic qualities are used to judge product quality, the aesthetic qualities of the paper bill may form part of consumers' evaluative beliefs. Klatzky et al. (1993) found that haptic responses to an object followed quickly after visual inspection when the consumer considered the evaluation of the object visually or semantically difficult. Consumers used touch as a way to evaluate the object when a

visual inspection did not provide them with enough information to make a judgement. In the context of EBPP, consumers may respond to the tactile quality of the paper (e.g. size and weight) and the visual cues in the form of a logo or the colour of the paper as a way to gather information about the sending organization or the information in the bill. Visual elements within a paper document, such as text colour and format, graphics, and layout, have been shown to affect the readability and functioning of the document (Sellen & Harper, 2003; Wallace & Yates-Mercer, 1980). Moreover, visual and tactile elements are typically adapted to a particular user, and a specific purpose (Kostelnick, 1988). In research on bill payment and presentment conducted for the Royal Mail and the Australian Post Office, the paper bill produced by the organization was considered to 'look more official' than something the consumer printed on their own printer (Danaher & Rossiter 2006; Royal Mail, 2003).

By adopting electronic bill presentment, the consumer would be accepting a physically intangible object, the electronic bill, as a substitute for a physically tangible object, the paper bill. The physically intangible object is untouchable and immaterial (Laroche et al., 2001). The electronic bill can be evaluated by the visual sensory system but because it cannot be evaluated by two other aesthetic systems (tactile and haptic), the quantity and quality of information available to the consumer can be said to be reduced. Intangibility has been shown to increase consumers' perception of risk (Featherman et al., 2006; Laroche et al., 2001). Aesthetics have been shown to influence consumer attitudes and behaviour (Bitner, 1992; Grunert et al., 2004). The aesthetics of the paper bill interacts with and/or supports the two other dimensions of an artefact: instrumentality and

symbolism. The instrumentality of the paper bill is discussed in subsection 2.1.2 followed by symbolism in subsection 2.1.3.

2.1.2 Instrumentality

Instrumentality refers to the extent to which an artefact contributes to, or hampers the goal of a task. The instrumentality of the paper bill has not been explored in the research literature, to date. The functions or affordances (Gibson, 1979) of paper documents have been explored in the literature. Those functions of paper documents that existed before EBPP that are relevant to the study of paper bills are their ability to facilitate work processes (Harper & Sellen, 1995) and their ability to be archived and retrieved at some point in the future (relative permanence) (Savic, 1995). Other functions for the paper bill emerged once consumers began using online bill payment. The paper bill may act as a back-up system should the consumers' computer technology be inaccessible and as an assurance of the consumers' rights in a problem resolution situation with banks or billing organizations.

2.1.2.1 Facilitates Work Processes

Paper documents support and facilitate work processes by transferring knowledge between people (Preda, 2002), supporting group adaptation (Gottlieb & Dilevko, 2003), assisting in the modification of attitudes and the achievement of common behaviour (Freeman, 2006; Randal et al., 2001), and supporting organizational processes (Harper & Shatwell, 2002; Sellen & Harper, 2003). Even 'piles of paper' (Maus et al., 2005) have been found to be important to employees as workflow and classification systems.

Paper documents have also been shown to support memory (Malone, 1983). Consumers tend to arrange objects in such a way as to remind them to take action or as a

way of locating the object at some point in the future (Case, 1991). Within the household, paper mail has been found to support the management and sharing of information within the household (Harper et al., 2003). Paper documents and bills also support the business activities of consumers by providing proof of expenditure for business or tax purposes (Bank Technology News, 2006). Consumers indicated that the paper bill was used as a reminder to pay the bill, was filed and kept in case it was required at some time in the future (Danaher & Rossiter 2006; Royal Mail, 2003).

Reading text from paper versus online has been examined empirically. Several studies have shown that comprehension is higher from paper than online (Spyridakis et al., 2005). Smart et al. (2001) showed that paper documentation is preferred for more complex tasks. Gottlieb and Dilevko (2003) concluded that the developer of online content will have difficulty in laying out information on a computer screen as clearly as they could lay out the same information on paper. The difficulty occurs, in part, because consumers read, interact, and organize paper documents differently than online documents.

Gerrard et al. (2006) found that inaccessibility was one of the reasons that non-users gave for not using online banking. Gerrard et al. (2006) described inaccessibility as the inability to connect to the online bank because of lack of access to a computer and/or the internet, or slow connection times for the service. Even when the lack of hardware is not an issue, accessibility of data is one of the key measures in evaluating the success of information systems (Wang et al., 1995). Accessibility in information systems refers to the availability of the data to users at the stage or time in the process that it is required.

2.1.2.2 Permanence

Permanence has been a traditional document characteristic, especially in financial transactions. In fact, the importance of documents and their long term preservation can be traced to the earliest civilizations. Clay tablets from 3000 BC found in the Middle East were preserved in archives to facilitate commercial enterprise, as well as administrative and legal dealings (Dascher, 2004). Recorded information that is considered permanent has three characteristics: (1) remains usable, (2) is available for some period of time, and (3) is under the control of the holder of the document (Savic, 1995). The consumer may have several concerns about the permanence of electronic documents based on their experience with the short life of the electronic storage media (Larsen, 1999) and the ability of others to alter electronic records without any evidence of the change (DeVries & Kiger, 2005; Gladney, 2004, Lynch, 2001).

2.1.2.3 Warranty and Redundancy Roles of the Paper Bill

To provide a context for the discussion of the two additional roles for the paper bill of warranty and redundancy, in the context of EBPP, this sub-section begins by reviewing the risks and the problems associated with banking method adoption and EPBB usage. The sub-section continues with a discussion of trust as a way for the adopter of a banking method or EPBB to manage risk. Based on the inconclusive result for the influence of trust in banking method adoption and by extension in EPBB, two new roles are proposed and discussed for the paper bill: a means of warranty and of providing redundancy. These additional roles, emerging in reaction to the risk inherent in online transactions, are ways in which the consumer may enhance the instrumentality of the

paper bill and how the consumer adapts in the face of the perceived threats to their financial security that are part of using electronic bill payment and presentment.

Consumers are uncertain about their financial and technical knowledge.

Jarvelainen and Puhakainen (2004) identified two risk categories in online banking: system dependant (technological problems and unclear or non-existent legal norms) and transaction specific (asymmetric distribution of information between the transaction partners materializing in decisions of economic actors). Consumers identified a preference for off-line banking, in part because when they are online, they must manage technical problems over which they have little control and less knowledge to fix (Walker & Johnson, 2005).

Trust is a way to manage risk or uncertainty. Trust has been defined variously depending on the situation, the actors being considered, the balance of power, the level of risk, and the degree to which the actions of one actor can be verified by the other (Bhattacharya et al., 1998; Harrison et al., 1997; Mayer et al., 1995; Rousseau et al., 1998; Singh & Sirdeshmukh, 2000). Trust was recognized as being essential to facilitating exchange relationships (Mayer et al., 1995; Sako & Helper, 1998) and as an important mechanism in helping consumers act in the face of uncertainty (Lewicki et al., 1998). Trust has been conceptualized as the positive expectation a person has for another person or an organization based on their past performance, and whether or not the actions of the person or organization can be monitored (Fogg & Tseng 1999; Luhmann, 1979). Trust in this research was considered as a psychological state comprising the intention of consumers to accept being vulnerable based upon their positive expectations of the intentions and behaviours of other people or organizations (Rousseau et al., 1998).

The interactions of consumers and organizations are generally unequal in terms of the balance of power (Heimer, 2001). One could argue that greater power is held by organizations due to the dependence of consumers on organizations for the products and services they provide and because organizations possess more information, expertise and financial resources (Shapiro, 1998). Consumers may consider organizations less trustworthy as a result of this inequality in that this power can be abused if organizations seek their own gain at an unfair expense to consumers. Alternatively, it has been argued that consumers hold more of the power because they have alternative choices available to them and can freely choose to stop interacting with organizations (Moynagh & Worsley, 2002). Of course, consumer power then only exists where there is considerable choice and freedom of movement. In situations where the balance of power is not equal, one of the actors is vulnerable to the other (Pfeffer, 1981). The weaker actor may seek mechanisms to improve the potential outcome in an interaction with the stronger actor by, for example, seeking ways to reduce or avoid dependence on him (Luhmann, 1979).

Researchers have found conflicting results for the impact of trust on the adoption of banking methods (Chau & Lai, 2003; Suh & Han, 2002). Trust has been found to positively influence consumer acceptance of online banking (Aladwani, 2001; Gurau, 2002; Suh & Han, 2002). Alternatively, trust has been seen to provide limited explanation of banking method adoption behaviour in the frameworks being tested (Colwell & Hogarth-Scott, 2004; Mattsson & Helmersson, 2004).

Ongoing relationships, interaction between the actors (Coulter & Coulter, 2003) and experience have been shown to be antecedents of trust (Doney & Cannon, 1997).

Consumers have direct and ongoing experiences with the way in which banks introduce

new technology and other services (Benamati & Serva, 2007). Problems encountered in dealing with new bank technologies, such as time spent waiting to have service failures dealt with, repetitively explaining problems, or being misunderstood, have been shown to reduce satisfaction and trust toward banks (Dully et al., 2006; Fram & Callahan, 2001).

One reason focus group respondents gave for resisting adopting online banking was that they wanted to have paper documents (Kuisma et al., 2007). Moreover, the respondents felt that the official paper receipt created by the organization or bank provided the respondents with indisputable evidence of a completed transaction (Kuisma et al., 2007). It may be that the consumer perceives being able to present the paper bill to the organization or bank when attempting to resolve a problem as stronger evidence of payment or errors that have occurred than the consumer's own verbal utterances.

The paper bill may act as a way for the consumers to maintain or gain control in the relationship with the organization or bank by reducing their dependency on the organization or bank for information. Employees have been found to resist giving up their paper files in favour of adopting electronic files so that they maintain control over the information in the files. Maintaining control of the information was important to the employees in order to protect their status within the organization (Komito, 1998) or to avoid redistribution of resources away from the employees' control (Hirschheim & Newman, 1988). Plouffe et al. (2000) found that both business and consumer bank customers attributed changes in bank policy as ways to reduce service levels or to increase costs to customers, whether or not that was the immediate outcome. Negative interpretation of the bank actions by customers when bank policies are changed may also reflect a distrust of banks.

Smither et al. (1994) suggested that consumers demonstrate their distrust of banks and organizations by monitoring their bank account transactions for mistakes. Yousafzai et al. (2005) found that structural assurances (e.g. security policies, privacy policies, legal and regulatory compliance, and guarantees) instead of trust were the antecedents to positive perceptions of an online bank. If the paper bill acts as a form of warranty and as a back-up or redundancy system in the ongoing utilization of online bill payment, the consumers' behaviour in resisting discontinuing the paper would be consistent with rational economic behaviour.

A warranty has been defined as an agreement made by the seller to the buyer to provide satisfactory or expected performance during a given period of time after the purchase (Ostrum & Iacobucci, 1998). A warranty may also act as a cue or signal of quality and reliability for the consumer in a situation where the consumer lacks the information or expertise to judge the quality and reliability of a product, service or organization (Arnold et al., 2007). It provides a pre-consumption assurance of quality and a way to handle product problems or a lack of product reliability. Also, it provides the basis of recourse for the consumer (Murthy et al., 2002) and, therefore, reduces perceived risk (Miyazaki et al., 2005). This research explores whether or not the paper bill is a mutually accepted form of documentation of an agreement between parties in a transaction and, as a warranty of an agreement, serves as a starting point for the resolution of any disputes that may arise between the parties.

The vulnerability of electronic records in organizations has been discussed extensively (Arp & Dickman, 2002; Barata & Cains, 2001; Duranti, 2001; Larsen, 1999; Phillips, 1997). Both adopters and non-adopters of various banking methods are aware of

the risks associated with electronic records. The frequency of use and types of transactions for which ABMs, telephone and online banking were used have been linked negatively to: (1) the perceived risks of computer failure (Perpermans et al., 1996; Tan & Teo, 2000), (2) slow or no connection to the Internet and unavailable websites (Gerrard et al., 2006), (3) the lack of physical evidence of payment (Hiltunen et al., 2005), and (4) the experience in trying to resolve problems (Kuisma et al., 2007; Sarel & Marmorsten, 2003).

When there is vulnerability to failure, there is a need for back-up in the form of a redundancy system in order to keep an overall system functioning, for recourse in determining how problems will be handled, and to allocate responsibility for the costs of and resolution of the problems. Redundancy is a form of protection against failure. Redundancy has been described in the engineering literature as the parallel use of additional components, processes, or even rules in order to increase the reliability of a system. In a critical situation, the parallel components allow the system to continue to function at the same time as the critical situation is rectified (Landau, 1969). In the information design literature, redundancy has been shown to improve communication (Mollerup, 2005).

Redundancy has not been tested in marketing previously, in the context of consumers' use or adoption of products or services. However, it has been discussed as part of quality control in the production of products (Hussain & Murthy, 1998) and in the use of multi-media advertising campaigns to increase consumers' level and amount of exposure to the advertising message. Consumers' perception that a redundancy system is

needed when using EPBB systems, and that the paper bill can serve that function should the consumers' computer systems fail or be inaccessible to them, requires further testing.

The above section discussed the possible utility of the paper bill to the consumer in the context of their experiences and risk perceptions in using online bill payment. Four instrumental roles for the paper bill were discussed. The ability to facilitate financial work processes and permanence had been identified as functions of paper documents by other researchers. New roles for paper bills, warranty and redundancy, emerged as consumers began using online banking and online bill payment and are identified for the first time in this study.

2.1.3 Symbolism

Symbolism refers to the meaning that an artefact elicits. Products communicate symbolic meaning (McCracken, 1986). Symbolic meaning communicated by products to the consumer is often a strong determinant of product selection even overriding physical product attributes (David, 1986; Hirschman & Holbrook, 1982; Levy, 1959). An assessment of symbolic meaning often includes an evaluation of the authenticity of the product. Authenticity perceptions have been studied as an important construct affecting behaviour in many disciplines including marketing (Beverland, 2005; Grayson & Martinec, 2004). Authenticity is associated with genuineness, truth, and evidence (Groves, 2001).

The advent of paper documents lead to the development of symbols to assist the receiver in verifying the authenticity and genuineness of the message and its sender. The symbols took many forms such as the quality of the paper on which the message was written, the wording of the messages, and seals and signatures indicating that the message

was authorized by a particular sender (Franklin, 1999). Authenticity of a document depends on knowing: (1) who created and signed the document; (2) the timing of its creation and the signature; (3) for whom the document was created; (4) the form and state of transmission; and (5) the manner of preservation and custody (Arp & Dickman, 2002; Duranti, 2001).

Paper documents provide evidentiary support in a dispute because they can be shown to be authentic (Larsen, 1999). Being able to prove the authenticity of information in electronic systems is critical to the successful adoption of these systems by consumers and organizations (Miyazaki & Fernandez, 2001). The consequences of electronic records that lack integrity or are lost due to technological obsolescence would be to reduce society's capacity to understand past actions, to prove wrongdoing, and to ensure compensation (Duff, 2001).

Authenticity may be relevant for consumers' management of their financial obligations and for their effective control of these obligations, particularly when they are using EPBB systems. Consumers must make judgments about the genuineness of the financial information provided by the organization as a representation of their actual financial obligation. Paper bills may act as symbols of the authenticity and genuineness of sending organizations. In research on bill payment and presentment conducted for the Royal Mail and Australian Post Office, consumers indicated that the paper bill was the 'real' bill and had more credibility than an electronic bill (Danaher & Rossiter, 2006; Royal Mail, 2003).

Featherman et al. (2006) demonstrated that the consequences of perceived artificiality (tested as an antonym to authenticity) of the electronic bill were increased

risk perceptions and reduced likelihood of the use of EPBB. Featherman and Wells (2004) tested a framework of intangibility to measure reactions to the replacement of paper-based processes by electronic-based information systems. Perceived artificiality of the electronic presentment system directly increased perceived risk, and indirectly affected system evaluation and adoption. Therefore, the role of the paper bills in consumers' assessment of authenticity may impact their willingness to give up paper bills when using EPBB systems.

Section 2.1 presented information related to the conceptualization of the paper bill as an artefact. The paper bill may serve valuable aesthetic, instrumental, and symbolic functions for the consumer as part of their financial management process. The three dimensions of artefacts will be integrated into the framework used to examine consumers' resistance to discontinuing paper bills through the "Attitude Toward the Object" (aesthetics and symbolism) and "Utilitarian Outcomes" (instrumentality). Sections 2.2 and 2.3 present the theory and frameworks that provide explanations of consumer attitudes and behaviour associated with innovation adoption or resistance.

2.2 Innovation Adoption Theory

This section reviews the frameworks used to test innovation adoption with a focus on those used in the context of banking method adoption, the innovation characteristics, and innovativeness as a consumer characteristic. The aim of this section is to determine whether or not existing frameworks provide an adequate explanation of consumers' resistance to discontinuing paper bills despite adopting the electronic bill payment function of EBPP systems.

2.2.1 Theoretical Frameworks and Application in Innovation Adoption

Innovation adoption has been defined as “the decision to make full use of an innovation as the best course of action available” (Rogers, 2003, p. 21). Using the definition of an innovation as an idea, practice or object that is perceived as new by an individual or other unit of adoption, (Rogers, 2003), a new banking method can be labelled as an innovation. Innovation adoption in banking has explored the adoption of bank technologies (Automatic Banking Machine (ABM), telephone and online banking) and payment methods (automatic deduction, debit cards, credit cards, telephone bill payment, and online bill payment).

Innovation adoption in banking has been explored either through attitude-behaviour frameworks (Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), the Theory of Planned Behaviour (TPB) (Ajzen, 1991), Decomposed Theory of Planned Behaviour (Taylor & Todd, 1995), or through frameworks specifically developed for the situation of innovation adoption (Technology Adoption Model (TAM) (Davis, 1989), Technology Adoption Model 2 (TAM2) (Venkatesh & Davis, 2000).

TRA (Fishbein & Ajzen, 1975) is presented in Figure 2.1 and was developed to explain “Behavioural Intention” based on the antecedents of “Attitude Toward the Behaviour” and “Subjective Norm.” The antecedent to “Subjective Norm” is “Normative Beliefs.” The antecedent to “Attitude Toward the Behaviour” is “Beliefs and Evaluations Toward the Behaviour.”

Figure 2.1 Theory of Reasoned Action (Fishbein & Ajzen, 1975)

TPB is presented in Figure 2.2 and was proposed by Ajzen (1991) as an extension of TRA. Ajzen added the antecedent called “Perceived Behavioural Control” to improve the explanatory power of the framework. The antecedent to “Perceived Behavioural Control” is “Control Beliefs and Perceived Facilitation.” The construct of “Control Beliefs” encompasses the consumers’ confidence in their ability to perform the task and the extent to which consumers have complete control over their own behaviour (Ajzen & Fishbein, 2005). The Decomposed Theory of Planned Behaviour (Taylor & Todd, 1995) splits up the “Beliefs and Evaluation” of TPB into multi-dimensional constructs dependant on the situation and, in this way, added predictive power to TPB when the TBP was applied to innovation adoption situations

Figure 2.2 Theory of Planned Behaviour (Ajzen, 1991)

When additional constructs were added to the frameworks, three frameworks, TRA, TPB and the Decomposed TPB demonstrated reasonable fit for the adoption of online banking method adoption (Liao et al., 1999; Walker & Johnson, 2006). Constructs that led to improvement in the prediction for online banking adoption were: (1) “Security and Privacy” (Pikkarainen et al., 2004), (2) “Past Experience” (with computers, technology, and personal banking) (Karjaluoto et al., 2002), (3) “Subjective Norms” (Wang et al., 2006), and (4) “Attitude Toward the Object” (Self-Serve Banking Technology) (Curran & Meuter, 2005).

In TRA and TBP, the beliefs are determined by the context in which the framework is being tested (Fishbein & Ajzen, 1975). Davis (1989) proposed and tested the TAM by using only two beliefs (“Perceived Ease of Use” and “Perceived Usefulness”) as the beliefs most relevant to innovation adoption regardless of the situation or innovation being adopted (Figure 2.3). “Behavioural Intention” is explained by “Attitude Toward Using the System.” The “Attitude Toward Using the System” is explained by two beliefs, “Ease of Use of the System” and “Perceived Usefulness of the System.”

Figure 2.3 – Technology Acceptance Model (Davis, 1989)

Over time, a number of antecedent constructs were added to TAM to reflect TPB, and to improve its explanatory power for innovation adoption when the model was tested in non-organizational settings and with consumers. The updated model is called TAM2 (Venkatesh & Davis, 2000).

TAM and TAM2 have been less successful, than the other three frameworks, in predicting banking method adoption. The limited statistical model fit for TAM may be explained by the use of pre-determined beliefs (“Perceived Ease of Use” and “Perceived Usefulness”) that may or may not be relevant in the adoption of a banking method (Shih & Fang, 2004). When additional constructs such as “Social Cost” and “Self-Image” (Hernandez & Masson, 2007; Plouffe et al., 2000; Rugimbana & Iverson, 1994) have been added to TAM and TAM2 in testing the adoption of banking methods, some improvement to model fit has been documented.

Theoretical exploration and framework testing in EBPP have focused on the adoption and non-adoption of banking methods. Five attitude-behaviour frameworks (TRA, TPB, decomposed TPB, TAM and TAM2) have been used to predict banking method adoption. Each framework has been found to be successful in predicting the adoption of a particular banking method only when the additional constructs noted above were added to the framework. Therefore, attitude-behaviour frameworks can be expected to be a useful foundation for studying the issue of electronic bill presentment.

The Composite Attitude-Behaviour framework proposed by Eagly and Chaiken (1993) will be discussed in Section 2.4 and will form the base of the framework for exploring consumers’ behaviour of resistance to discontinuing an existing technology.

The Composite Attitude-Behaviour Framework (Eagly & Chaiken, 1993) solves many of the issues identified in the attitude-behaviour frameworks discussed in this section.

No theoretical exploration of the consumers' behaviour of resistance to discontinuing an existing technology when a suitable alternative innovation is available has taken place nor has a framework been proposed or tested. Therefore some significant improvement in understanding the context of the consumers' technology-shift process is possible and it is this aspect that is addressed by this study. The next section of this literature review discusses the characteristics of innovations that affect adoption rates and levels in banking method adoption in order to determine which characteristics might be relevant in understanding the behaviour of resistance to discontinuing an existing technology.

2.2.2 Innovation Characteristics

Rogers (2003) proposed five characteristics of an innovation that affect the rate and level of its adoption. These characteristics are: Relative Advantage, Complexity, Compatibility, Triability and Observability. Consumers' perceptions of these characteristics of innovations explain most of the variance in the rate of adoption of innovations (Rogers, 2003). The five characteristics have been used to explain the adoption and non-adoption of banking methods and to discriminate between adopters and non-adopters on the basis of their perceptions of these characteristics. The innovation characteristics have been added to TPB, TRA and TAM frameworks (Gerrard et al., 2006; Karahanna et al., 2006; Lasser et al., 2005; Lee et al., 2002; Liao et al., 1999).

Relative Advantage is expressed as the "degree to which an innovation is perceived as being better than the idea it supersedes" (Rogers, 2003, p. 15). The consumer

compares the attributes of the innovation to the technology that will be replaced and makes a decision about which is better. Compatibility is expressed as “the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters” (Rogers, 2003, p. 18). The consumer forms a favourable or unfavourable attitude toward the innovation based on its ability to do the task required by the consumer and in a manner consistent with the pre-existing attitudes and beliefs of the consumer.

Including the characteristics of an innovation through the “Attitude Toward the Object” in the TAM, TRA and TPB frameworks has been found to improve statistical model fit (Gerrard et al., 2006; Karahanna et al., 2006; Lasser et al., 2005; Lee et al., 2002; Liao et al., 1999). Of the five innovation characteristics, Relative Advantage (Gilly & Zeithaml, 1985; Liao et al., 1999; Marshall & Heslop, 1988; Lockett & Littler, 1997; Pepermans et al., 1996; Rugimbana, 1995; Rugimbana & Iverson, 1994) and Compatibility (Black et al., 2001; Karahanna et al., 2006; Lang & Colgate, 2003; Lee et al., 2005; Liao et al., 1999; Rugimbana, 1995; Rugimbana & Iverson, 1994) have emerged as the strongest predictors of adoption of a banking method.

The innovation characteristics suggest that the potential adopter forms attitudes toward the innovation, not only by examining the innovation on its own merit (Complexity, Triability and Observability) but also by comparing the innovation to existing technology (Relative Advantage) and evaluating the innovation’s potential to meet the adopter’s existing values, experiences and needs (Compatibility). As was concluded in Section 2.2.1, the addition of an “Attitude Toward the Object” construct improves statistical model fit. Statistical model fit improvement occurs either when the

“Attitude Toward the Object” is tested explicitly in a research framework (Curran & Meuter, 2005; Curran et al., 2003; Karjaluoto et al., 2002) or through the implicit comparison of the innovation to the existing technology (Tan & Teo, 2000; Walker and Johnson, 2006).

The first two sub-sections of this literature review have suggested that a stronger explanation of the adoption of a banking method can be found when both the “Attitude Toward the Object” and the “Attitude Toward the Behaviour” constructs are included in models predicting innovation adoption intentions and behaviours. The next section reviews the predictive contribution of a consumer’s ‘Innovativeness’ in order to determine whether ‘Innovativeness’ improves the understanding of banking method adoption or non-adoption.

2.2.3 Innovativeness as a Consumer Characteristic

Three types of ‘Innovativeness’ are discussed in this section. Consumer ‘Innovativeness’ has been studied as: (1) attributes or traits that are innate to the consumer, (2) consumers’ beliefs about their own attitudes toward innovation adoption, and (3) the time taken by the consumer to adopt an innovation in relation to the earlier or later adopter of the innovation. Each of the above will be discussed in turn beginning with characteristics that are innate to the consumer.

‘Innovativeness’ as an innate characteristic of a consumer has been tested as related to either demographic variables or personality traits. Demographic variables (e.g. income, education and age) or personality traits (e.g. sensation seeking, need for change) have often been shown to successfully predict which consumers were more likely to adopt an innovation (Midgley & Dowling, 1993; Rugimbana, 1995). However, the predictive

value of demographics in the adoption of banking methods has been found to be inconsistent. Of a variety of demographic variables tested, age (Karjaluoto, 2002; Marshall & Heslop, 1988; Wan et al., 2005), income (Kolodinsky et al., 2004; Lasser et al., 2005; Pikkarainen et al., 2004), and education (Karjaluoto, 2002) have emerged in some research as predictive of banking method adoption. Karjaluoto (2002) found that younger adults are more likely to adopt online banking, while Lee et al. (2003) found that consumers who bank online tend to be older. Several studies (Kolodinsky et al., 2004; Lasser et al., 2005; Pikkarainen et al., 2004) have shown a direct relationship between banking innovation adoption and income, but at least one study found that income predicts adoption behaviour indirectly through risk tolerance (Hallahan et al., 2004).

Personality traits (e.g., sensation seeking, need for change) have also been shown to successfully predict which consumers were more likely to adopt an innovation (Midgley & Dowling, 1993; Rugimbana, 1995). Wong and Carducci (1991) found that high sensation seekers demonstrated greater risk-taking behaviours in everyday financial matters (defined as maintaining adequate funds in a bank account, buying automobile insurance, and concerns over career income) than low sensation seekers.

Consumers may hold beliefs about their willingness to adopt an innovation that varies depending on their assessment of how the changes that result from adopting an innovation affect them. A categorization of 'more' innovative has been ascribed to consumers indicating a preference for change (McCracken, 2008; McDonald et al., 2003), while a categorization of 'less' innovative has been ascribed to those consumers who indicate a preference for the *status quo* (Wind & Mahajan, 2002). The situation in which a consumer was innovative has been found to vary in the same consumer when

different innovations are tested. Hence 'Domain-Specific Innovativeness' was found to provide better explanation of consumers' adoption of an innovation than 'General Innovativeness' (Gatignon & Robertson, 1989). Lasser et al. (2005) found that 'General Innovativeness' was negatively related to online banking, while 'Domain-Specific (internet) Innovativeness' improved the prediction for online banking adoption. In other studies, 'General Innovativeness' improved the prediction for ABM use frequency (Pepermans et al., 1996) and improved TAM statistical model fit in online banking adoption (Lee et al. 2003). However, Sathye (1999) found no relationship between 'Innovativeness' and consumers' resistance to adopting online banking.

'Innovativeness' as a way of categorizing adopters has also been done based on the time to adoption in relation to the first adopters (Rogers, 2003). Rogers (2003) categorized consumers' innovativeness in terms of the earliness or lateness of innovation adoption by the last group in relation to the first group. He created five adopter groups with the first group labelled 'Innovators' and the last, 'Laggards.' However, regardless of the time taken to adopt, the latecomers are considered adopters. In the literature, adopters of online banking and online bill payment have been described as having the demographic and personality characteristics associated with 'Innovativeness' (Lee et al. 2003, Lockett & Littler, 1997). Given that fourteen years have passed since the introduction of online banking to Canada, it could be expected that all adopter groups ('Innovators' to 'Laggards') are represented within the population of online bankers.

Regardless of the way in which 'Innovativeness' is conceptualized, it has been seen to have no consistent predictive value or marginally useful information for improving innovation adoption behaviour in banking. Therefore, identifying a consumer type or

characteristic is unlikely to add value in explaining resistance to discontinuing paper bill presentment. Instead, attitude-based approaches may be more useful since the result of greater understanding of consumer attitudes may allow marketers' to take action to change the consumers' behaviour of resistance to discontinuing the paper bill. Theoretical exploration and framework testing in EBPP have focused on the adoption and non-adoption of banking methods, rather than on the adoption of bill payment and presentment. The "Attitude toward the Behaviour" construct has received the bulk of the research attention, although the addition of the "Attitude toward the Object" to the frameworks tested has been shown to improve the prediction of banking method adoption.

Subsection 2.2 explored the research on innovation adoption and concludes that the existing literature provides some theory that can assist with understanding the "Attitude of Resistance to Discontinuing a Behaviour" and in developing a framework that could be confidently used to predict "Resistance to Discontinuing the Use of an Existing Technology." A discussion of resistance to innovation adoption research is presented in Section 2.3.

2.3 Resistance to Innovation Adoption

Resistance to innovation adoption is viewed as an alternative outcome to innovation adoption (Szmigin, 2003). Resistance to innovation adoption research has focused on the attitudes toward the innovation as central to consumers' attitudes and behaviour of resistance. However, attitudes to the existing technology (in the face of an innovation that could replace the existing technology) and its value have been largely ignored in the

resistance to innovation adoption literature. Moreover, much of the research on resistance to innovation adoption has been tested in the context of the work environment and resistance of employees to adoptions of innovations introduced in their organization (Lapointe & Rivard, 2005). Resistance to innovation adoption tested in the context of organizations is constrained in its usefulness to the proposed research for two reasons: (1) the utilitarian outcomes of adoption accrue largely to the organization and not to the individual employee, and (2) the organization has the power to compel adoption by the employee in a variety of ways, including removing the employee from the usage situation or even removing the employee from the organization.

This study places less emphasis on this research and focuses instead on the literature that examined resistance to innovation adoption by consumers in voluntary usage situations and on resistance to banking method adoption research. Eagly and Chaiken (1995) suggested that understanding the attitudes that develop during the innovation adoption decision requires an understanding of the attitudes that underlie either adoption or resistance behaviours. Attitudes underlying adoption behaviours were explored in Section 2.2 while attitude underlying resistance behaviours will be explored in this section. Attitude change theories, ‘resistance to change’ as a consumer characteristic, and resistance to innovation adoption theory are explored, in turn.

2.3.1 Attitude Change Theories

Attitude change often precedes behaviour change (Ajzen & Fishbein, 2005). How consumers balance between their openness to change and their desire to continue to hold attitudes and related behaviours is not well understood (Eagly & Chaiken, 1993). If attitudes were constantly changing, then consumers would experience a constantly

shifting view of the external environment. Making a decision or taking an action would be very difficult. On the other hand, attitudes that never change would limit the consumer's ability to adapt to changes in the environment or to learn from their own experience (Ahluwalia, 2000). Therefore, some reasonable and workable attitude flexibility is to be expected.

The focus of the research work in attitude change has been on resistance to persuasion based on the communication content, and degree to which the content of the communication persuades the consumer, or can be rendered unconvincing. The oldest and best known resistance to persuasion framework is McGuire's inoculation theory (1964). Inoculation theory focuses on how consumers can improve their ability to resist a communication message. Inoculation theory posits that exposing consumers to weakened forms of the attacking message could assist consumers to develop defences against the attacks with the result that the attitudes held before the attaches remain unchanged. McGuire (1964) showed that improving consumers' capability to defend their beliefs, improved their resistance to attitude change. The motivations and attitudes that gave rise to consumers' ability to resist a persuasive message were not identified or tested in McGuire's research.

An alternative motivational theory of resistance to persuasion is Brehm's theory of psychological reactance (1966). Brehm asserts that when individuals perceive their freedom, to engage in some behaviour or to hold an attitude, is threatened, they experience reactance. Reactance, in turn, leads them to attempt to restore their threatened freedom. Individuals attempt to restore their behavioural or attitudinal freedom by maintaining their original attitudes or behaviours, or even changing their attitudes or

behaviour in a direction opposite to that being advocated (Eagly & Chaiken, 1993).

Wyner (1974) demonstrated that acceptance or rejection of an argument by a consumer lay in: (1) the comprehension of the arguments, (2) acceptance or refutation of the arguments by counter arguing, and (3) other unspecified factors.

The Elaboration Likelihood framework (Petty & Cacioppo, 1986) posits that there are two routes to the acceptance of an argument, the central route and the peripheral route. In the central route, consumers change their attitudes towards a product as a result of conscious evaluation and acceptance of persuasive arguments. In the peripheral route, consumers change their attitudes by reacting to readily available cues in the communication message and often regardless of the cues' relevance to the product.

Behaviour change as a result of attitude change could be said to come from the functions that attitudes serve for consumers. Attitudes are formed in interaction with the environment and reflect a history of direct and indirect experience with the objects of these attitudes. Attitudes serve four key functions for consumers: knowledge, value-expressive, utilitarian and ego-defensive (Katz, 1960). The attitude functions such as knowledge (e.g. acquired through conditioning such as that developed by the duration and frequency of receiving the paper bill), utilitarian (e.g. utility in managing personal finances), and ego-defensive (e.g. social norms and self-identity) suggest the need to include constructs in the proposed framework related to performance-based learning. Utilitarian functions, social norms and self-identity and their linkage to the attitudes and behaviours related to discontinuing the use of paper bills will be discussed in the context of the proposed research framework for the study in Section 2.4.

Ajzen and Fishbein (2005) argued that attitude change often precedes behaviour change. Attitudes reflecting resistance to innovation adoption have been linked to a reduced likelihood of adopting the behavioural response that is required in order to adopt an innovation (Ellen et al., 1991). Black et al. (2001) found that the reactions of users and non-users of online banking differed in the importance and perceived difficulty of the changes required to adopt online banking. Rogers (1992) suggested that consumers would accept computer banking (computer banking was the predecessor to online banking) if consumers believed that online banking would not reduce the control and power they have with their existing banking methods. Therefore, consumers' perceptions of the power and control functions of the paper bill will be studied along with the paper bill's utility in consumers' financial management processes and its influence on the consumer's self-identity. Subsection 2.3.2 explores the research on 'Resistance to Change' as a consumer characteristic.

2.3.2 Resistance to Change as a Consumer Characteristic

'Resistance to Change' as a characteristic of the consumer has been studied as: (1) demographic variables, (2) personality traits, and (3) the time taken by subsequent consumers to adopt the innovation as compared to the first adopter. Each of the above will be discussed in turn beginning with demographic variables.

Of the demographic variables, older age has most often been associated to stronger resistance attitudes and behaviour and younger age has been associated with stronger innovative attitudes and behaviour (Laukkanen et al., 2007; McNamara, 1989; Rogers, 2003). However, McPhail and Fogarty (2004) found that mature adults (50 years of age and older) were as willing as younger adults to discontinue using one banking method in

favour of adopt another new one. Other demographic variables (lower income and less education) have been correlated with non-adoption or resistance to innovation adoption (Byramjee, 2008; Cai et al., 2008).

As noted in Section 2.2.3, Rogers (2003) segmented adopters into five groups based on the degree to which the adopter was open to adopting an innovation earlier than other members of a social system. The salient value of the fastest adopters ('Innovators') is venturesomeness (the desire for the rash, the daring and the risky). The 'Innovator' is willing and has the means to cope with a high degree of uncertainty about the ability of the innovation to function adequately, if at all, in the usage situation. McCracken (2008, p.223) commented that: "Typically they ('Innovators') do not care that other people think the innovation odd or loathsome. They like the shock of the new or they have the constitution that can endure it." In contrast to the 'Innovator' group, the four remaining groups ('Early Adopter', 'Early Majority', 'Late Majority' and 'Laggard') need a greater level of certainty about the ability of innovation to function adequately in the usage situation.

Identifying and testing of single or multiple personality traits related to resistance in innovation adoption has led to inconclusive results. 'Dogmatism' is a personality trait that measures a person's resistance in the face of new or unfamiliar ideas, and it has been used to explain innovation non-adoption and resistance to change (Sharma, 2008). Nov and Ye (2008) found that 'Dogmatism' was negatively correlated with 'General Innovativeness' in IT usage but Reisenwitz and Cutler (1998) found that 'Dogmatism' did not discriminate between internet users and non-users.

Oreg (2003) developed and tested an instrument to measure a 'General Resistance to Change' based on multiple personality traits. The traits that were found to be linked to 'General Resistance to Change' were 'reluctance to lose control,' 'cognitive rigidity,' 'lack of psychological resilience,' 'intolerance to the adjustment period involved in change,' 'preference for low levels of stimulation and novelty,' and 'reluctance to give up old habits' (Oreg, 2003). The instrument has had inconsistent results in predicting resistance to change in organizational settings and has not been tested in voluntary consumer usage situations.

Personality traits are generally considered to be fairly stable across time, age and similar situations (Roberts & Pomerantz, 2004). In fully adopting EBPP consumers discontinue receiving the paper bill or printing the electronic bill on paper. Sixty-three percent of Canadian online consumers use online bill payment for at least one of their bills (Statistics Canada, 2008). However, less than five percent of consumers who pay bills online have adopted electronic bill presentment only (Nader & Lintell, 2008). If adopting online bill payment is considered to reflect the behaviour of an innovative consumer, then it could be said that the non-adoption of electronic bill presentment could be considered the behaviour of a resistant consumer. It is difficult to see how personality traits could explain why consumers simultaneously exhibit 'Innovativeness' and 'Resistance to Change' in the situation of EBPP.

The inclusion of 'Resistance to Change' as a characteristic or trait of the consumer in the proposed framework would be unlikely to improve the understanding of the behaviour of resistance to discontinuing an existing technology and therefore was not

included as a construct of study in this research. Subsection 2.3.3 explores the theory of resistance to change in response to an innovation.

2.3.3 Resistance to Change in Innovation Adoption

For resistance to occur, a challenge or threat caused by some object has to be perceived by the individual or organization (Dent & Goldberg, 1999). Ram (1989) argued that resistance is a response toward an innovation in a particular situation. Ram and Sheth (1989) defined resistance as an attitudinal reaction offered by the consumer toward using an innovation. Researchers (Bagozzi & Lee, 1999; Ram, 1989; Ram & Sheth, 1989; Sheth, 1981) studied consumers' non-adoption behaviour by focusing on understanding the ability of the innovation to meet consumers' needs. Sheth (1981) and Ram (1987) attributed resistance to two constructs: "Perceived Risk" of adopting the innovation and "Habit." Sheth (1981) and Ram (1987) suggested that attitudinal resistance is offered by consumers to an innovation either because it poses potential changes from a satisfactory status quo or because it conflicts with their beliefs. The proportional impact of "Habit" and "Risk" varied with the characteristics of the consumer and/or the consumer's perceptions of the innovation.

Building on their initial research and their identification of "Habit" and "Risk" in consumers' resistance to innovation adoption, Ram and Sheth (1989) specified five sources of barriers to innovation adoption -- Usage, Value, Risk, Tradition (included "Habit") and Image. The barriers to adoption can be seen as the mirror image of the innovation characteristics, Relative Advantage and Compatibility (Rogers, 2003). Of the five barriers, the Usage barrier (the innovation is incompatible with existing practices or habits) (Mantel, 2000) and the Value barrier (the innovation is unable to produce

economic benefits or performance-based benefits) appeared to engender stronger resistance to banking method adoption (Hiltunen et al., 2005; Kuisma et al., 2007; Laukkanen et al., 2008). In addition to the Usage and Value barriers, habitual use of the ABM was also raised as a barrier to adopting online banking (Kuisma et al., 2007).

Resistance (Klonglan & Coward, 1970) has also been categorized as a behaviour rather than an attitude. This is consistent with Roger's (2003) conceptualization of rejection. The attitude of resistance to innovation adoption has shown to have a negative relationship with the intention to adopt and through the adoption intention, to the adoption behaviour (Ellen et al., 1991). Resistance to innovation adoption can be viewed as an alternative outcome and be linked with different attitudes than innovation adoption. Nabih et al. (1997) demonstrated that consumers were able to describe and differentiate between attitudinal resistance (no attitudes formed, or formation of attitudes without trial) and behavioural resistance (postponement of acceptance after trial, or rejection after trial) even though the demonstrated behaviour may look the same. No further research work has been done on exploring how and why consumers make distinctions between attitudinal and behavioural resistance at different points in the adoption decision.

While resistance theory and research in marketing had as its focal object, the innovation and its adoption, extant theory does not offer a framework that could be confidently used to predict resistance to discontinuing use of an existing dominant technology as part of the full adoption of the innovation. The literature review suggested possible constructs ("Habit," "Attitude Toward the Object," "Subjective Norms," "Self-Identity") that may be appropriate in understanding the attitude and behaviour of resistance to discontinuing the paper bill. However, the relationships between these

constructs (“Habit,” “Attitude Toward the Object,” “Subjective Norms,” “Self-Identity”) and the attitude and behaviour of resistance were not specified. This study will propose and test a framework that can be used to predict resistance to discontinuing the use of an existing dominant technology. Section 2.4 discusses the research framework for the study of resistance to discontinuing paper bills tested in this study.

2.4 Proposed Research Framework for the Study of Resistance to Discontinuing Paper Bills

In adopting a new innovation, consumers must often discontinue using an existing technology. In the case of electronic bill presentment the benefits accrue mainly to banks and billing organizations when they can suppress the production of the paper bill and its delivery to the consumer. Large Canadian banks and most billing organizations have decided not to suppress the paper without the consumers’ permission. Most consumers who pay bills online have not given their permission to have the paper bill suppressed. Therefore, innovation adoption isn’t only about the innovation or the characteristics of the consumer, but is also about the existing technology and why consumers would resist giving it up. How and why consumers resist the replacement of existing technologies (of which the paper-based bill is one) is not well understood and has received limited research attention.

Several research frameworks that had been used to explore consumers’ innovation adoption behaviour discussed in the previous sections were considered before the Composite Attitude-Behaviour Framework (Eagly & Chaiken, 1993) was selected as the base of the Resistance to Discontinuing the Paper Bill Framework that was tested in this

study. The research frameworks that were considered are briefly reviewed under three categories: (1) attitude-behaviour frameworks that have been used to explore innovation adoption or resistance to innovation adoption (TRA, TPB), (2) innovation adoption frameworks (TAM and TAM2), and (3) proposed but untested resistance to innovation adoption frameworks.

As discussed in Section 2.3.1 attitude-behaviour frameworks and innovation adoption frameworks have been found to be successful in predicting the adoption of a particular banking method but only when additional constructs such as “Habit” and “Attitude Toward the Object” were added to the frameworks. Wan et al. (2005) in a study of bank customers who used multiple banking methods concluded that attitude-behaviour frameworks may be less applicable when the behaviour is habitual, that is, done regularly and over a long period of time (e.g. branch and telephone banking). Moreover, when additional constructs have been added to the frameworks their inclusion has been haphazard and inconsistent, thus constraining the usefulness of attitude-behaviour and innovation frameworks in the study of banking method adoption.

Several consumer ‘resistance to innovation adoption’ frameworks have been proposed but not tested (Bagozzi & Lee 1999; Ram, 1989). The construct of “Habit” has been included in the proposed resistance frameworks but not the “Attitude Toward the Object.” In testing innovation adoption and resistance to innovation adoption frameworks, researchers consider that the attitude with the stronger explanatory power was the “Attitude Toward the Behaviour” rather than the “Attitude Toward the Object.”

Figure 2.4 presents the Composite Attitude-Behaviour Framework (Eagly & Chaiken, 1993). Eagly and Chaiken’s (1993) framework takes into account two of the

major research traditions on the attitude-behaviour relation, the investigation of the “Attitude Toward the Object” (Fazio, 1986) and the “Attitude Toward the Behaviour” (Fishbein & Ajzen, 1975). Eagly and Chaiken (1993) believe that these two traditions can contribute to the understanding of the attitude-behaviour process but that each tradition is looking at the attitude-relation from a different vantage point.

Figure 2.4 – Composite Attitude-Behaviour Framework (Eagly and Chaiken, 1993)

Many points of difference could be discussed between the two attitude-behaviour traditions, but for this study, the critical difference lies in the perspective of the researcher. If the researcher considers the attitude-behaviour process as largely spontaneous and uncontrolled by the consumer (Fazio, 1986), or largely deliberate and controlled by the consumer (Fishbein & Ajzen, 1975), the attitude-object is included or excluded from the framework.

Fazio (1986) includes the attitude-object within his framework. Moreover, Fazio et al. (1989) consider that the “Attitude Toward the Object” is automatically activated from the consumers’ memory upon the presentation of sensory cues related to the attitude object. Fishbein and Ajzen (1975) consider the attitude-object as external to their framework and include only the consumers’ beliefs and evaluations about the attitude-object in their framework. Fazio (1986) does not indicate in his framework how “Beliefs and Evaluations Toward the Behaviour,” “Subjective Norms” and “Behavioural Intentions,” which are consciously controlled by the consumer, are activated, and about which Fishbein and Ajzen (1975) provide more clarity.

Eagly and Chaiken (1993) believe that the theory developed by Fazio (1986) and Fishbein and Ajzen (1975) has merit and can assist in the understanding of many behaviours. In combining the two frameworks to create the Composite Attitude-Behaviour Framework, Eagly and Chaiken (1993) posited that the attitude-behaviour process is neither wholly spontaneous nor wholly deliberate but rather a combination of both.

The Composite Attitude-Behaviour Framework was selected as the base of the Resistance to Discontinuing the Paper Bill Framework. The framework specifies the relationship between “Attitude Toward the Object” and “Attitude Toward the Behaviour” as well as the relationships between “Habit” and “Behaviour,” “Attitude Toward the Behaviour” and “Attitude Toward the Object.”

The Composite Attitude-Behaviour framework is similar to TPB in that the “Attitude Toward the Behaviour” and “Normative Outcomes” lead to “Intention” and indirectly to “Behaviour.” However, unlike TPB, “Self-Identity Outcomes” also lead to

“Intention” and “Habit” links directly with “Behaviour.” Five constructs (“Attitude Toward the Object,” “Self-Identity Outcomes,” “Habit,” “Normative Outcomes” and “Utilitarian Outcomes”) lead to the “Attitude Toward the Behaviour.”

The Composite Attitude-Behaviour Framework is considered unique in its simultaneous inclusion of two attitude constructs (“Attitude Toward the Behaviour” and the “Attitude Toward the Object”) as predictors of behaviour (Olson & Maio, 2003). As well as the direct influence of the “Attitude Toward the Object” on the “Attitude Toward the Behaviour” the “Attitude Toward the Object” links indirectly to “Behavioural Intention” through “Utilitarian Outcomes,” “Normative Outcomes,” “Self-Identity Outcomes.”

In addition to the “Attitude Toward the Object,” the Composite Attitude-Behaviour Framework also includes “Self-Identity Outcomes” and “Habit.” Adding constructs to TPB was anticipated by Ajzen and Fishbein (2005), but they cautioned that adding a construct should be done only if the construct is found to significantly increase the prediction of intention. On-going research on TRA and TPB provides empirical evidence for the predictive effects of “Self-Identity Outcomes” on consumer intentions and behaviour (Charng et al., 1988; Fitzmaurice, 2005; Terry et al., 1999). Rapaport and Orbell (2000) found that the effect of “Self-Identity” on intention is mediated through attitudes.

Adding “Habit” to the TPB as a direct antecedent to “Attitude Toward the Behaviour” has been discussed by Ajzen and Fishbein (2005). Ajzen and Fishbein suggested that “Habit” may appear to have a direct impact on behaviour in an unfamiliar situation where a consumer encounters difficulties in implementing an intended action.

When difficulties occur consumers may revert to their original pattern of behaviour.

Ouellette and Wood (1998) found that the frequency of past behaviour has also been shown to reflect habit strength and to directly impact behaviour. The Composite Attitude-Behaviour framework suggests the relevant importance of “Habit” to the framework by showing multiple relationships from “Habit” to the “Attitude Toward the Object,” “Attitude Toward the Behaviour” and “Behaviour.”

The Composite Attitude-Behaviour Framework has received limited empirical testing. Van der Geer and Kangis (2002) found that the Composite Attitude-Behaviour Framework had better model fit than the Theory of Planned Behaviour in predicting whether or not a physician chose to prescribe generic drugs rather than brand-name drugs. In a study on teenage smoking behaviour, Hersey et al., (2005) demonstrated that the inclusion of the “Attitude Toward the Object” (tobacco industry) had an effect on “Attitude Toward the Behaviour” (attitude toward smoking), “Intention” and “Behaviour” (continuing to smoke).

As proposed in this study, innovation adoption for consumers is not only about the innovation but also about the existing technology and why consumers would resist giving it up. The Composite Attitude-Behaviour Framework (Eagly & Chaiken, 1993) offers several advantages over other frameworks used to explore consumers’ innovation adoption behaviour. In particular, the Composite Attitude-Behaviour Framework includes constructs (“Attitude Toward the Object,” “Habit,” “Self-Identity”) that have been found to be important in improving the explanation of banking method adoption, and specifies the relationships among these constructs as well as their relationships to “Attitude Toward the Behaviour,” “Intention” and “Behaviour.” Therefore it suggests itself as a

strong candidate for capturing and including key constructs that may improve the explanation of this behaviour as the basis of the framework used in this study. Section 2.5 discusses the constructs for the Proposed Research Framework for the Resistance to Discontinuing the Paper Bill.

2.5 Constructs of the Proposed Research Framework of the Resistance to Discontinuing the Paper Bill

This section discusses the constructs of the Framework of the Resistance to Discontinuing the Paper Bill in the following order: “Attitude Toward the Object,” “Utilitarian Outcomes,” “Normative Outcomes,” “Self-Identity Outcomes,” “Habit” “Attitude of Resistance to Discontinuing the Paper Bill,” “Intention to Resist Discontinuing the Paper Bill” and “Behaviour of Resistance to Discontinuing the Paper Bill.” These constructs were identified by Eagly and Chaiken (1993) as part of the Composite Attitude-Behaviour Framework.

2.5.1 Attitude Toward the Object

Attitudes and their association with behaviour have been the focus of a great deal of theory and research in consumer behaviour and marketing. Considerable controversy has existed over the years regarding the attitudinal focus that is most relevant in predicting behaviour, particularly whether the focus should be on the “Attitude Toward the Object” or instead, the “Attitude Toward the Behaviour.” Initially, Fishbein’s attitude-behaviour framework was built around “Attitude toward the Object” (1961). Later, Fishbein and Ajzen shifted to frameworks that predicted behavioural intentions based on attitudes to behaviours (1975, 1991). Most recently, these authors have accepted the potential value

of re-including “Attitude Toward the Object” as a part of their framework, along with other constructs.

An attitude object can be defined as an entity that is the object of evaluation. The object could be a person, product, idea or an organization. The object is perceived by a consumer who tries to make sense of the object. The bundle of information represented by the attitude object is conceptualized as the information about the product’s attributes (Loken & Wyer, 1983). The expectancy-value framework connects attitudes to the attitude object through the consumer’s belief structure. Fishbein (1961) demonstrated that a consumer’s attitude toward any object is a function of the consumers’ beliefs about that object and the evaluative aspects of those beliefs. His framework showed that a consumer holds positive attitudes about objects that are believed to have attributes that lead to good outcomes (utilitarian, normative and self-identity).

Fazio et al. (1989) viewed attitudes that are stored in memory as the association between the attitude object and the summary evaluation of the object in the context of the situation in which it is viewed. Empirical testing demonstrated that an attitude toward an object is accessed from memory by the presentation of cues through the perception of the attitude object (Fazio et al., 1986). Fazio and Zanna (1981) suggested that attitudes based on direct experience have greater clarity and are held with more confidence and certainty than those based on indirect experience. Attitude strength refers to strength of the link between the object and its evaluation. Frequency of exposure increases the positive evaluation of the object (Petty et al., 1997). The appearance of an object may activate attitudes that exert influence on behaviour so quickly that there is no conscious attitude activation (Bargh et al., 1992). It could be concluded that if the attitude is strongly held

and the evaluation automatically activated, then any attempt to change the behaviour associated with the attitude would necessarily include the attitude object in the explanatory framework.

Positive attitudes are formed toward objects that have been instrumental in achieving desirable goals or avoiding undesirable goals, while negative attitudes are formed toward objects that prevent goal attainment or punish the individual (Voss et al., 2003). Instrumental outcomes of attitude objects are learned through past experience and depend on past reinforcements with the objects (Lutz, 1978). “Attitude Toward the Object” has been linked to intention and behaviour. Lutz (1985) and Mittal (1990) found that both “Attitude Toward the Advertiser” and “Attitude Toward Advertising” lead to purchase intention. Burns and Lutz (2006) tested the “Attitude Toward the Online Advertising Format” and found that it was significantly related to the behaviour of ‘clicking on’ an online advertisement. Eagly and Chaiken (1993), among others, suggested that in a situation where there are multiple attitudes, the “Attitude Toward Object” will come to mind before other attitudes, creating an order within a hierarchy.

The paper bill is frequent, regularly occurring and familiar object that is an important part of the consumers’ financial management process. Bagozzi and Lee (1999) argued that strong attitudes toward existing objects contribute to resistance to change and may prevent consumers from being open to innovation adoption. Research frameworks used to study the non-adoption of electronic bills (Featherman et al., 2006; Featherman & Wells, 2004) have not included the “Attitude Toward the Electronic Bill” which may account for their failure to adequately predict non-adoption of the electronic bill.

In this research the paper bill was conceptualized as a multi-dimensional artefact. Several valuable aesthetic, symbolic and instrumental functions may be done by the paper bill for the consumer as part of a consumer's financial management process. Including the "Attitude Toward the Object" in the framework may strengthen the understanding of consumers' resistance to discontinuing the paper bill. Two dimensions of the paper bill (aesthetic and symbolic) are reflected in the "Attitude Toward the Object" and the third dimension (instrumental) is reflected in the "Utilitarian Outcomes" construct of the framework.

2.5.2. Utilitarian Outcomes

"Utilitarian Outcomes" are defined by Eagly and Chaiken (1993, p. 209) as "rewards and punishments that are anticipated to follow from engaging in a particular behaviour." Positive attitudes are formed toward objects that have been instrumental in achieving desirable goals or avoiding undesirable goals, while negative attitudes are formed toward objects that prevent goal attainment or punish the individual (Voss et al., 2003). Utilitarian outcomes of attitude objects are learned through past experience and depend on past reinforcements with the objects (Lutz, 1978).

Consumers appear to have negative attitudes toward the removal of paper from the banking process which suggests that the paper bill serves valuable utilitarian functions for the consumer as part of the consumer's financial management process, as well as providing information in the bill payment transaction. The "Utilitarian Outcomes" of the paper bill in EBPP include: (1) the facilitation of financial transactions, (2) acting as a permanent record, (3) providing a back-up system, and (4) acting as an assurance of the

rights and responsibilities for the consumer in a situation of problem resolution with a bank or organization.

2.5.3 Normative Outcomes

The “Normative Outcomes” construct was defined by Eagly and Chaiken (1993, p. 210) as the “approval and disapproval that significant others are expected to express in relation to a behaviour, as well as self-administered rewards and punishments that follow from internalized moral rules.” Both TRA (Fishbein & Ajzen, 1975) and TPB (Ajzen, 1991) include “Normative Outcomes” as a construct labelled “Subjective Norm.” Consumers make purchase decisions about products that result in outcomes, some of which involve the reactions of other consumers (Bearden et al., 2001; Escalas & Bettman, 2005). However, Clark and Goldsmith (2006) found that ‘Innovativeness’ was associated negatively with normative influences. By having less interest in the opinion of others, innovators and early adopters adopt innovations earlier than other consumers and adopt based on their own perceptions of the innovations’ benefits and in disregard to the potential consequences of their adoption including the negative reaction of other consumers (McCracken, 2008; Moore, 2002).

“Normative Outcomes” is most often measured by asking respondents to consider the reaction of family and friends (Ajzen & Fishbein, 2005). “Normative Outcomes” has not been found significant in banking method adoption when the construct is measured as the “Opinion of Family and Friends” (Liao et al., 1999; Shih & Fang, 2005; Tan & Teo, 2000). The construct becomes significant when it is measured as the “Opinion of Employees” (Curran et al., 2003; Howcroft et al., 2002). Consumers’ preference for online banking increased when the consumers characterized bank employees’ attitudes

and behaviours as unhelpful (Walker & Johnson, 2005) or when consumers feel that bank employees were impolite, disinterested, or incompetent in handling a problem (N'Goala, 2007). The paper bill represents the financial obligations of a household. In the situation of EPBB, both the reaction of family and friends, and the employees of banks and organizations may form part of the "Normative Outcomes" of the consumer who is responsible for paying the household bills.

2.5.4 Self-identity Outcomes

Self-identity, self-concept, self, and identity have been variously used to identify a construct of the consumer's representation of oneself to oneself (Friese, 2000). The construct name used (self-identity, self-concept, self, or identity) depends on the theoretical base (e.g. biology, psychology or philosophy) of the researcher. The term self-identity is used from this point forward in this dissertation.

The "Self-Identity Outcomes" construct was defined by Eagly and Chaiken (1993) as affirmations or repudiations of the self-identity by the consumer that are anticipated to follow from behaviour. Self-identity is considered a multi-dimensional, hierarchical construct, and researchers have observed that the self-identity remains fairly consistent over time. Different aspects of the self-identity manifest themselves through a variety of self-evaluations and reactions that are dependent on the situation (Friese, 2000). Self-identity has been tested extensively in marketing. Product and brand choices may convey meaning about the kind of person someone is, wants to be, or wants to be seen to be (Belk, 1988; Solomon, 1983). Sirgy (1982) suggested that self-identity beliefs interact with product perceptions to form a positive or negative purchase intention.

One of the many functions of self-identity is to provide consumers with feelings of potentiality, that is, the feeling consumers have about whether or not they possess the necessary abilities to reach their goals (Baumeister et al., 1990). Results of research have also indicated that consumers' perception of their ability, regardless of their experience in using the product successfully, affects their evaluative and behavioural response to the product (Bandura, 1977).

Electronic bill payment and presentment is a self-serve technology, and whether or not consumers use it may depend on the consumers' perception of their ability to use the technology without the assistance of another person. Marzocchi and Zammit (2006) showed that consumers feel increased responsibility for the work done in a self-service situation and assume at least part of the responsibility for their role in the transaction. Hence, difficulties arising from self-serve transactions may negatively affect one's view of oneself. Bowen and Ford (2002) indicated that consumers may not complain when they do not feel qualified to evaluate the service or when they think that they have not communicated accurately. Instead, consumers perceived themselves as incompetent and having some responsibility for the failure in self-serve situations. Satisfaction or dissatisfaction with technology-based self-serve (TBSS) transactions has also been found to be related to self-identity (Mick & Fournier, 1998; Walker et al., 2002).

Self-identity has been shown to provide implicit rules for actions that influence behaviour (Terry et al., 1999). Consumers' self-identity has been found to influence financial preferences and behaviour (Hira & Mugenda, 1999). Perry and Morris (2005) demonstrated that consumers' propensity to save, budget, and control spending depended partly on their level of perceived control over outcomes, along with their knowledge and

financial resources. Consumers' view of themselves as good financial managers was affected by feedback from the outcome of decisions the consumer made about financial transactions (Gunnarsson, 1999). In adopting or resisting electronic bill presentment, consumers may have beliefs about the technical and financial risks associated with EBPP that may support or weaken their view of themselves as good financial managers.

Therefore, two manifestations of the consumers' self-identity that are relevant in EPBB and that would appear to be linked to resistance to discontinuing paper bills may be the consumers' tolerance for financial and technical risk. Risk tolerance has been labelled as the psychological sum of fear to greed trade-off, for example, making the most of opportunities and avoiding regret over losses incurred (Davey, 2004). Cordell (2002) suggested that financial risk propensity may be composed of four concepts (propensity, attitude, capacity and knowledge) but that two elements, attitude and capacity were sufficient to measure risk adversity in financial transactions. Testing "Self-Identity Outcomes" in this way is consistent with the literature which suggests that self-efficacy beliefs have the ability to reflect consumer's self-identity, particularly in routine and regular behaviours as is the case for bill receipt and payment.

Moreover, Jacks and O'Brien (2004) suggested that the consumer will be highly motivated to resist persuasion when their self-identity is threatened in some way. Arguably, consumers may also be highly motivated to resist discontinuing a technology that supports their self-identity. The persuasiveness of an argument in changing attitudes lies in a variety of cognitive mechanisms and social role mechanisms which include social relationships and self-identity (Eagly & Chaiken, 1993).

In this study where EBPP, a self-serve technology which facilitates financial transactions, is used as the context for testing, the most relevant situational “Self-Identity Outcomes” to be tested are the technical and financial risk tolerance of the consumer.

2.5.5 Habit

Day-to-day banking and bill payment can be considered, in part, as habitual behaviours. The habits that support bill payment behaviour are formed by training and education, from the attitudes of others, and by the frequent and regular repetition of the behaviour. Frequency of past behaviour has been shown to reflect habit strength and has a direct impact on behaviour (Ouellette & Wood, 1998). Most consumers use several payment methods each month, thereby strengthening their habits associated with bill payment (Karjaluoto, 2002).

Consumers’ bill payment and presentment behaviours may also formed on the unplanned experiences when they have problems with their bill followed by positive and negative experiences with the bank’s or organization’s ability to recover and satisfy them in the event of problems (N’Goala, 2007; Walker & Johnson, 2005). Consumers are limited in their ability to control the transaction quality, and an error can have potentially serious consequences. In a study on bill payment, half of respondents had experienced a billing error in the past year which required them to take some action (Doney, 1989).

When habit strength toward an existing technology is strong, consumers are less willing to adopt a new innovation (Ram, 1987). Perceived relative advantage and compatibility of innovations (Rogers, 2003) as facilitators of innovation adoption indirectly involve links of the innovation assessment to consumers’ previous behaviour and learning, many of which involve habits. “Habit” has been found to be a moderating

variable between the “Intention to Continue to Use” and the “Behaviour of Continuing to Use” (Limayem, 2007). When faced with changes in the payment system, respondents report that they have altered their past payment behaviour (Bednarz et al., 2005). However, the extent to which and the circumstances under which the respondents’ payment behaviour changed depended on the type and magnitude of the change made to the payment system (Benton et al., 2007). Habits have been linked to resistance to innovation adoption behaviour (Murdock & Franz, 1993). Therefore consumers’ habits may increase consumers’ reluctance to try new behaviours or to adopt innovations depending on the context, the type and magnitude of the change in the behaviour required (Zeelenberg & Pieters, 2004).

“Habit” has been conceptualized in four ways: (1) as an unconscious behaviour (Triandis, 1977), (2) as rational decision rules (Wood et al., 2002), (3) as a reluctance to change from a past practice (Murdock & Franz, 1983; Sheth, 1981) and (4) as a learned behaviour functional in obtaining goals (Verplanken et al., 1997). Ajzen (2001, 2002) urged that if “Habit” is added to TPB, it should be operationalized in attitude frameworks independent of the behaviour it is supposed to predict. Consistent with this advice and that of Eagly and Chaiken (1993), this study operationalized the habit of receiving bills as an automatic action and the frequency with which the bill was received (Triandis, 1977).

2.5.6 Attitude Toward the Behaviour, Intention and Behaviour

Discontinuance was defined by Rogers (2003) as the decision to reject an existing technology after previously adopting it. The “Attitude Toward the Behaviour” in the framework in the research reported in this dissertation is tested as the “Attitude of Resistance to Discontinuing the Paper Bill.” The “Intention” is tested as the “Intention to

Resist Discontinuing the Paper Bill” and the “Behaviour” is tested as the “Behaviour of Resistance to Discontinuing the Paper Bill.” Conceptualization of the constructs of the “Attitude Toward the Behaviour,” “Intention to Behave,” and “Behaviour” in this way is unusual. However, it may provide new insight into the behaviours related to a dominant existing technology where consumers, against all manner of incentives and communication messages, have resisted the attempts of banks and other organizations to take away paper documents, even if the consumers have to recreate the electronic information on paper themselves.

2.5.7 Summary of Literature Review

The literature review discussed a conceptualization of the paper bill and bank account statement as a multi-dimensional artefact having meaning to the consumer beyond simply the information contained in it. It provided a review of the theories used to explain innovation adoption and resistance with a particular focus on their application in consumer banking. While aspects of attitude-behaviour and innovation adoption frameworks had some success in explaining and predicting banking innovation behaviour there is significant value that is expected to be found in filling the gaps in understanding related to the “Attitude Toward the Object,” “Attitude Toward the Behaviour,” “Habit,” “Utilitarian Outcomes,” “Normative Outcomes,” and “Self-Identity Outcomes.” A rationale for the selection of the Composite Attitude-Behaviour Framework as the base of a Resistance to Discontinuing the Paper Bill Framework was provided. The exogenous and endogenous constructs of the framework (“Habit,” “Attitude Toward the Object,” “Utilitarian Outcomes,” “Normative Outcomes,” Self-Identity Outcomes,” “Attitude of

Resistance to Discontinuing the Paper Bill,” “Intention to Resist Discontinuing the Paper Bill,” “Behaviour of Resistance to Discontinuing the Paper Bill”) were discussed.

This dissertation fills three key gaps in the literature. This study reconceptualises the paper bill as an artefact in order to broaden the dimensions of its evaluation. Specific instrumental, aesthetic and symbolic dimensions of the paper bill were identified and now can be tested. This study suggests a new perspective for exploring innovation adoption. Past research has focused on the consumers’ reaction to an innovation, whereas this study focuses on the consumers’ orientation toward the existing technology. Rather than labelling consumers’ inaction in the face of a replacement innovation as non-adoption, resistance to innovation adoption or *status quo* behaviour, this study defines the behaviour as resistance to discontinuing an existing dominant technology. In order to test this alternative perspective of consumers’ resistance behaviour, a framework will be developed and tested in the specific situation of EPBB.

Chapter 3 presents the Resistance to Discontinuing the Paper Bill Framework, specifies the theoretical relationships among the constructs, and presents the hypotheses that are proposed and will be tested in the pre-test stage of the research.

3. RESEARCH FRAMEWORK AND HYPOTHESES

Eagly and Chaiken's Composite Attitude-Behaviour Framework (1993) forms the base of the framework tested to understand resistance to discontinuing the paper bill. This chapter presents the Resistance to Discontinuing the Paper Bill Framework, specifies the theoretical relationships among the constructs, and presents the hypotheses that will be tested.

While the constructs proposed by Eagly and Chaiken (1993) provided guidance for the relationships and linkages among the constructs, their predictive ability would be limited unless they were more detailed in their conceptualization in the context of EBPP. Modification of social-psychological frameworks has a long tradition in the development of innovation adoption theory. For example, Davis (1989) made changes to TRA to develop TAM for the specific situation of adoption of computers within organizations and to create a more parsimonious framework. Davis (1989) replaced the general construct of "Beliefs and Evaluations" with: "Perceived Usefulness" and "Perceived Ease of Use" (Figure 3.1).

Figure 3.1 – Example of the Modification of TRA to Create TAM by Specifying the Constructs

The constructs tested in this research are based on the constructs proposed by Eagly and Chaiken (1993) but are adapted for the situation of EPBB. The Composite Attitude-Behaviour Framework has a total of eight constructs (“Habit,” “Attitude Toward the Object,” “Utilitarian Outcomes,” “Normative Outcomes,” “Self-Identity Outcomes,” “Attitude of Resistance to Discontinuing the Paper Bill,” “Intention to Resist Discontinuing the Paper Bill,” “Behaviour of Resistance to Discontinuing the Paper Bill”). The Framework for Resistance to Discontinuing the Paper Bill has a total of 17 constructs.

Figure 3.2 presents the complete framework with the constructs and the relationships among the constructs. A discussion of the correspondence between the constructs identified by Eagly and Chaiken (1993) and those used in the proposed Framework for Resistance to Discontinuing the Paper Bill can be found after Figure 3.2.

Figure 3.2 – Proposed Framework for the Resistance to Discontinuing the Paper Bill with the Hypotheses Identified on the Framework

The eight constructs proposed by Eagly and Chaiken (1993) and the seventeen constructs tested in the Framework for Resistance to Discontinuing the Paper Bill are shown in Table 3.1. Four constructs (“Habit,” “Attitude Toward the Behaviour,” “Intention” and “Behaviour”) remained conceptualized as single constructs. Four constructs (“Attitude Toward the Object,” “Utilitarian Outcomes,” “Normative Outcomes,” “Self-identity Outcomes”) were conceptualized as multiple constructs in order to more fully contextualize their application in EBPP. The foundations of these constructs were discussed in Section 2.5.

Table 3.1 – Original and Tested Constructs

Constructs Proposed by Eagly and Chaiken (1993)	Constructs Tested in This Research
Habit	Habit
Attitude Toward the Object	Authenticity Aesthetics
Utilitarian Outcomes	Redundancy Warranty Permanence Facilitates Financial Work Processes
Normative Outcomes	Opinions of Family and Friends Opinions of Banks and Companies
Self-identity Outcomes	Financial Risk Tolerance Technical Risk Tolerance
Attitude Toward the Behaviour	Attitude of Resistance to Discontinuing the Paper Bill
Intention	Intention to Resist Discontinuing the Paper Bill
Behaviour	Behaviour of Resistance to Discontinuing the Paper Bill

In this research, the paper bill is identified as an artefact with three dimensions. In the Framework for Resistance to Discontinuing the Paper Bill,” the three dimensions of the paper bill enters the framework through six constructs: “Aesthetics,” “Authenticity” (“Attitude Toward the Object”) and “Redundancy,” “Warranty,” “Permanence” and Facilitates Financial Work Processes” (“Utilitarian Outcomes”). Two constructs (“Opinion of Family and Friends,” “Opinion of Banks and Companies”) represent “Normative Outcomes.” “Self-Identity” is also represented by two constructs (“Financial Risk Tolerance,” Technical Risk Tolerance”). The “Attitude Toward the Behaviour” in this study is the “Attitude of Resistance to Discontinuing the Paper Bill.” The intention is the “Intention to Resist Discontinuing the Paper Bill” and the behaviour is “Behaviour of Resistance to Discontinuing the Paper Bill.”

The hypothesized paths remain the same as those proposed by Eagly and Chaiken (1993). Eleven constructs (“Habit,” “Authenticity,” “Aesthetics,” “Redundancy,” “Warranty,” “Permanence,” “Facilitates Financial Work Processes,” “Opinions of Family and Friends,” “Opinions of Companies and Banks,” “Financial Risk Tolerance,” “Technical Risk Tolerance”) are proposed in the framework as impacting on the “Attitude of Resistance to Discontinuing the Paper Bill.” “Habit” is shown with a direct relationship to “Authenticity,” “Aesthetics,” “Attitude Toward the Behaviour” and “Behaviour of Resistance to Discontinuing the Paper Bill.” “Authenticity” and “Aesthetics” were modeled as having a direct relationship with eight constructs (“Redundancy,” “Warranty,” “Permanence,” “Facilitates Financial Work Processes,” “Opinions of Family and Friends,” “Opinions of Companies and Banks,” “Financial Risk Tolerance,” “Technical Risk Tolerance”). Five constructs (“Attitude of Resistance to

Discontinuing the Paper Bill,” “Opinions of Family and Friends,” “Opinions of Companies and Banks,” “Financial Risk Tolerance,” “Technical Risk Tolerance”) are modeled as having a direct relationship with the “Intention to Resist Discontinuing the Paper Bill.” The “Attitude of Resistance to Discontinuing the Paper Bill” and the “Intention to Resist Discontinuing the Paper Bill” are shown in a direct relationship with the “Behaviour of Resistance to Discontinuing the Paper Bill.”

Table 3.2 presents the hypotheses of the Resistance to Discontinuing the Paper Bill Framework that are proposed going into the pre-test stage of the research. The hypotheses are reflective of the framework relationships and indicate that all relationships are posited as positive.

Table 3.2 – Hypotheses Tested in the Pre-test

H₁ Habit Set	
H _{1a1}	Habit is positively related to authenticity
H _{1a2}	Habit is positively related to aesthetics
H _{1b}	Habit is positively related to the attitude of resistance to discontinuing the paper bill
H _{1c}	Habit is positively related to the behaviour of resistance to discontinuing the paper bill
H₂ – Attitude-Object Set	
H _{2a1-3}	Authenticity of the paper bill is positively related to the perception of redundancy of the paper bill
H _{2a1-4}	Authenticity of the paper bill is positively related to the perception of warranty of the paper bill
H _{2a1-5}	Authenticity of the paper bill is positively related to the perception of permanence of the paper
H _{2a1-6}	Authenticity of the paper bill is positively related to the perception that it facilitates financial work processes
H _{2a2-3}	Aesthetics of the paper bill is positively related to the perception of redundancy of the paper
H _{2a2-4}	Aesthetics of the paper bill is positively related to the perception of warranty of the paper bill

Table 3.2 – Hypotheses Tested in the Pre-test (Continued)

H₂ – Attitude-Object Set (Continued)	
H _{2a2-5}	Aesthetics of the paper bill is positively related to the perception of permanence of the paper
H _{2a2-6}	Aesthetics of the paper bill is positively related to the perception that it facilitates financial work processes
H _{2b1-7}	Authenticity of the paper bill is positively related to opinions of family and friends
H _{2b1-8}	Authenticity of the paper bill is positively related to opinions of companies and banks
H _{2b2-7}	Aesthetics of the paper bill is positively related to opinions of family and friends
H _{2b2-8}	Aesthetics of the paper bill is positively related to opinions of companies and banks
H _{2c1-9}	Authenticity of the paper bill is positively related to financial risk tolerance
H _{2c1-10}	Authenticity of the paper bill is positively related to technical risk tolerance
H _{2c2-9}	Aesthetics of the paper bill is positively related to financial risk tolerance
H _{2c2-10}	Aesthetics of the paper bill is positively related to technical risk tolerance
H _{2d1}	Authenticity of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H _{2d2}	Aesthetics of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H₃ – Outcome Set	
H _{3a3}	Redundancy of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H _{3a4}	Warranty of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H _{3a5}	Permanence of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H _{3a6}	Facilitates Financial Work Processes is positively related to the attitude of resistance to discontinuing the paper bill
H _{3b7}	Opinions of family and friends is positively related to the attitude of resistance to discontinuing the paper bill
H _{3b8}	Opinions of companies and banks is positively related to the attitude of resistance to discontinuing the paper bill
H _{3c9}	Opinions of family and friends is positively related to the intention to resist discontinuing the paper bill
H _{3c10}	Opinions of companies and banks is positively related to the intention to resist discontinuing the paper bill

Table 3.2 – Hypotheses Tested in the Pre-test (Continued)

H₃ – Outcome Set (Continued)	
H _{3d9}	Financial risk tolerance is positively related to the attitude of resistance to discontinuing the paper bill
H _{3d10}	Technical risk tolerance is positively related to the attitude of resistance to discontinuing the paper bill
H _{3e9}	Financial risk tolerance is positively related to the intention to resist discontinuing the paper bill
H _{3e10}	Technical risk tolerance is positively related to the intention to resist discontinuing the paper bill
H₄ – Attitude Set	
H _{4a}	The attitude of resistance to discontinuing the paper is positively related to the intention to resist discontinuing the paper bill
H _{4a}	The attitude of resistance to discontinuing the paper is positively related to the behaviour of resistance to discontinuing of the paper bill
H₅ – Intention-Behaviour	
H ₅	The intention to resist discontinuing the paper bill is positively related to the behaviour of resistance to discontinuing the paper bill

4. RESEARCH METHODOLOGY AND ANALYSIS

The research methodology and analysis chapter outlines the approach to the research including research design, measurement instruments, sampling method, data collection method, identification of the measures and data analysis. In order to understand the influencing factors in the consumer's behaviour of resistance to discontinuing the paper bill and to test the Resistance to Discontinuing the Paper Bill Research Framework, a two-stage research approach was used. The purpose of the Stage 1 was to ensure that the measures provided appropriate coverage of the concepts under study. A pre-test was conducted and the results were reflected in the final questionnaire used in Stage 2. The purpose of Stage 2 was to test the proposed framework. Data for Stage 2 were collected from 1054 online respondents, and the data were screened for skewness, kurtosis, question and case missing values, and outliers, and then explored by descriptive analysis followed by Structural Equation Modeling analysis.

4.1 Stage 1 – Pre-test Research

The purpose of Stage 1 was to ensure that the questionnaire items provided appropriate coverage of the concepts being studied in this research and that the measures of these concepts were clear to the respondents. The concepts were translated into questions for a data collection instrument. This instrument was pre-tested in two stages with fifteen respondents to check the comprehension, logic and relevance of the measurement items being tested.

4.1.1 Research Design of the Pre-test

A two-stage pre-test of the data collection instrument was undertaken before the survey was launched nationally to the full sample. The questionnaire development will be described in Section 4.1.2. Here the administration of the pre-test will be discussed. A convenience sample of fifteen respondents was selected based on: (1) paying at least one bill online in the past year, (2) receiving at least one paper bill in the past year, (3) paying at least three bills each month, and (4) using at least two bank service delivery channels (e.g. ABM, bank branch, automatic deduction, telephone, online) per month. Respondents were recruited based on a short recruiting script from a neighbourhood with a demographic composition that increased the incidence level of the recruitment characteristics. Respondents were contacted twice – first by the researcher in-person to recruit them and screen them, and a second time to conduct the interview.

Ten respondents completed and commented on the clarity, logic and relevance of the questions in the data collection instrument. The questionnaire evaluated by ten respondents had three sections. Section A of the questionnaire involved behaviour with paper and electronic bills. Section B included a series of attitude statements that correspond to the “Intention to Resist Discontinuing the Paper Bill,” “Habit,” “Authenticity,” “Aesthetics,” “Redundancy,” “Warranty,” “Permanence,” “Facilitates Financial Work Processes,” “Financial Risk Tolerance,” “Technical Risk Tolerance” and the “Attitude of Resistance to Discontinuing the Paper Bill.” Section C assessed respondents’ responses to a series of attitude statement that correspond to “Opinions of Family and Friends” and “Opinions of Companies and Banks.” Questions to collect the demographic data did not appear on the pre-test questionnaire but were added to the final

questionnaire. Respondents' comments made after they had completed the questionnaire were recorded on their completed questionnaires by the researcher.

Respondents also reviewed and commented on a mock-up of a credit card statement to ensure that no measures for the "Behaviour of Resistance to Discontinuing the Paper Bill," "Aesthetics," "Authenticity," "Redundancy," "Warranty," "Permanence" and "Facilitates Financial Work Processes" had been overlooked. The mock-up of a paper credit card statement was created by a major Canadian Bank in the format and layout of an actual statement. The financial transactions presented on the mock-up of a credit card statement were fictitious but were based on the demographic profile and spending pattern of a typical online bill payer. Presenting the respondents with a mock-up of a credit card statement was done to remind them of other items that may not have occurred to them when they were completing the questionnaire.

Overall, in the debriefing that followed the completion of the questionnaire, the respondents reported that they found the questionnaire to be interesting to complete, that it took a reasonable amount of time (between 10 to 15 minutes to complete depending on the speed of the respondent), and that the questions were relatively clear, easy to understand and to answer. Dillman (2000) indicates that survey questions being clear and easy to answer improves response rate in a self-administered questionnaire. The respondents suggested many minor adjustments to the wording of items to further clarify the meaning of them. The adjustments suggested by the respondents were made to the final questionnaire.

Five respondents reviewed and discussed the "Intention to Resist Discontinuing" question to ensure that the double-negative wording of this question was as clear as

possible. Respondents completed four versions of the question and then selected the version that maximized their comprehension of the items. All five respondents selected the same version of the question as the easiest to read and understand.

Copies of the recruitment scripts, and the questionnaires used in the pre-test are included in Appendices B and C. Section 4.1.2 presents the identification of the measures, as well as the respondents' comments on (1) the questionnaire, (2) the mock-up of a credit card statement, and (3) the alternative versions of the item measuring the "Intention to Resist Discontinuing the Paper Bill."

4.1.2 Identification of the Measures and Pre-test Results

The constructs contained in the theoretical research framework were used as the basis for developing question items for the data collection instrument. Through a review of the large base of relevant literature, some measures of the constructs of relevance to this research were identified. Measures which had been used in earlier research were adapted for use in this research and incorporated into the initial questionnaire. New measures of the constructs to be tested were developed specifically for this research.

Measures existed for six constructs ("Authenticity," "Opinion of Family and Friends," "Opinion of Companies and Banks," "Financial Risk Tolerance," "Technical Risk Tolerance," "Habit"). Minor modifications were made to the wording of existing measures to fit the topic of the study. The base of the wording of the measures used to evaluate two constructs ("Attitude of Resistance to Discontinuing the Paper Bill," "Intention to Resist Discontinuing the Paper Bill") was adapted from traditional measures used to measure attitudes and brand switching intentions. However, the measures were

reconceived to focus on the attitudes and intentions toward the action of discontinuing an existing technology.

Six constructs tested in this research are either new to the study of consumer attitudes and behaviour in the situation of electronic bill payment and presentment or are new conceptualizations in the study of consumer attitudes and behaviour in resistance to discontinuing an existing technology. “Aesthetics,” “Permanence” and “Facilitates Financial Work Processes” are constructs that are new to the study of consumer attitudes and behaviour in the situation of electronic bill payment and presentment. However, research on how employees manage their work with paper documents provided ideas for the development of the measures. The constructs of the “Behaviour of Resistance to Discontinuing the Paper Bill,” “Redundancy” and “Warranty” are new conceptualizations in the study of general consumer attitudes and behaviour, as well as the study of attitudes and behaviour in resistance to discontinuing an existing technology. New measures were developed and tested in this study based on the discussion with the respondents in Stage 1. Table 4.1 presents a list of the constructs used with the number of items in the measurement instrument tested in the pre-test and their source.

Table 4.1 - References for Measurement of the Constructs

Construct	Number of Items	Reference
Behaviour of Resistance to Discontinuing the Paper Bill	3	New
Intention to not Discontinue the Paper Bill	7	Adapted from Bansal et al., 2005; Burnham, 2003; Royal Mail, 2003
Attitude of Resistance to Discontinuing the Paper Bill	5	Adapted from Bansal & Taylor, 2002; Osgood et al., 1957
Authenticity (version 1)	3	Beverland, 2005; Grayson & Martinec, 2004
Authenticity (version 2)	6	Australian Post, 2006; Groves, 2001; Peterson, 2005; Royal Mail, 2003; Trilling, 1971, 1972
Aesthetics	11	Ideas for items from Ganier & Barcenila, 2007; Sellen & Harper, 2003; Wallace & Yates-Mercer, 1980
Redundancy	3	New
Warranty	3	New
Permanence	3	Ideas for items based on Savic, 1995
Facilitates Financial Work Processes	11	Ideas for items based on Australia Post, 2006; Granier & Barcenilla, 2007; Harper & Sellen, 1995; Hiltunen et al., 2005; Kuisma, 2007; Royal Mail 2005
Opinion of Family and Friends	2	Liao et al., 1999; Shih & Fang, 2005; Tan & Teo, 2000
Opinion of Companies and Banks	11	Curran et al., 2003; Hilgert & Hogarth, 2003; Howcroft et al., 2002; Komito, 1998; Kuisma et al., 2007; N'Guola, 2007; Plouffe et al., 2000; Sarel & Marmorsten, 2003
Financial Risk Tolerance	12	Chang, 1994; Troisi & Christopher, 2006
Technical Risk Tolerance	6	Parasuraman, 2006
Habit	4	Triandis (1970)

A detailed discussion of the operationalization of the constructs and the results of the discussion with the respondents after they completed the questionnaire or reviewed

the alternative wording of the “Intention to Discontinuing the Paper Bill” question is presented in subsections 4.1.2.1 to 4.1.2.8.

4.1.2.1 Behaviour of Resistance to Discontinuing the Paper Bill

Empirical operationalization of the “Behaviour of Resistance to Discontinuing the Paper Bill” does not exist in the literature. Development of the behavioural measures for this research considered that resistance to changing a behaviour can range from passive resistance (e.g. arising from lack of awareness or lack of interest), to active resistance (e.g. verbal challenges to the change, or not adopting the change) or even aggressive physical resistance (e.g. destruction of the alternative/sabotage) (Coetese, 1999).

Conceptualization of the “Behaviour of Resistance to Discontinuing the Paper Bill” includes three active resistance behaviours. Online bill payers may: (1) continue to receive paper bills and while aware of them, choose not to receive electronic bills, (2) continue to receive paper bills and also to receive electronic bills, or (3) adopt electronic bill presentment but print the bill received electronically on paper using their own computer.

Behavioural data can be gathered by: (1) having the respondent report on personal behaviours, (2) having the researcher observe and document the respondent’s behaviour, or (3) using data external to the research (e.g. customer sales data) (Davis, 2000). This research used self-reported behaviour measures. Having the respondent estimate the number of paper and electronic bills and statements received can be considered an objective measure of the “Behaviour of Resistance to Discontinuing the Paper Bill.” Regular bills and statements are received and acted upon monthly, which means that respondents are likely to be able to give an accurate estimate of the number received.

The “Behaviour of Resistance to Discontinuing the Paper Bill” was initially operationalized with two items based on receiving paper bills in the mail and receiving bills online and printing them out. Respondents were in agreement that they would prefer not to discontinue receiving paper bills. They indicated that they would not take any action to stop the paper bill. For some services, respondents received an electronic bill and a paper bill for the same service. Most respondents did not print the electronic bill if they also received a paper bill. For some services, a paper bill was not provided by the organization, in which case almost all of the respondents printed out the electronic bill in order to have a paper copy of the electronic bill.

Some respondents questioned whether or not the banks and organizations that they dealt provided an electronic bill and/or statement. In Canada, bills that are available both on paper and electronically include bills related to a land line or mobile telephone, cable, electricity, hydro, municipal taxes, oil, gas, bank credit card statements and retail credit card statements and bank account statements. In the final questionnaire respondents were asked to think about the bills listed above. In addition, respondents were asked to report on the number of paper bills and statements received that is or could be received electronically.

The discussion of the mock-up credit card statement prompted comments from the respondents around the envelope in which the bill was received. A few respondents commented that they didn’t necessarily open the envelope the bill comes in but kept it along with other opened bills. They went on to reflect on this seemingly self-described irrational behaviour by saying, “I guess I want the paper bill in case I need it in the future but I don’t need the information immediately.” To reflect the behaviour with regard to

opening the envelope, three items were added to the questionnaire -- envelope opened when it is first received, envelope not opened but kept, and envelope discarded without being opened.

The discussion of the mock-up credit card statement also reminded respondents about the number of credit cards and bank accounts that they had. All respondents had more than one credit card and bank account. For some, the accounts were with the same financial institution while others dealt with multiple institutions. Respondents indicated that when they had multiple accounts to manage, receiving paper bank statements or credit card statements reduced the chance of paying the wrong amount to the wrong organization. The design and layout of the paper statement clearly signals to the respondent which institution sent it to them and thereby facilitates their financial record keeping, and the statement's retrieval, if required. To reflect the behaviour of having multiple accounts, two items were added to the questionnaire -- the number of bank accounts and the number of credit cards held by the respondents.

In the final questionnaire, data were collected using nine items: (1) the number of paper bills and statements received, (2) the number of bills and statements received online, (3) the number of paper bills and statements printed out, (4) the number of paper bills and statements received by the respondent that are or could be received electronically, (5) the number of bank accounts, (6) the number of credit cards, and (7) the action taken with the envelope in which the bill is received (3 items). These items will be examined in the measurement model assessment process to determine whether or not all or some of these are adequate measures of "Behaviour of Resisting Discontinuing the Paper Bill."

4.1.2.2 *Intention to Resist Discontinuing the Paper Bill*

Intention to behave can be either positive or negative. The items used to measure the “Intention to Resist Discontinuing the Paper Bill” were adapted from Bansal et al. (2005), Burnham (2003) and Royal Mail (2005). Bansal et al. (2005) and Burnham (2003) assessed the intention to stay with the existing provider with measures that focused on the intention to switch to the competing provider and/or the chance or likelihood of the respondent staying with current provider. Royal Mail measured the strength of the intention to continue to receive bills in the mail through the willingness of the respondent to take action to avoid the removal of the paper bill. The actions to avoid removal of the paper bill were measured in terms of visiting the bank branch or ABM to print a bill or paying a fee to continue to receive a bill.

Of the four versions of the double-negatively worded questions for the “Intention to Resist Discontinuing the Paper Bill” reviewed by the respondents, the preferred question wording was, “I am not going to stop receiving paper bills and statements.” While these respondents still had concerns about the double-negative wording, they acknowledged that they could answer the questions although they felt that they had to pause to ensure that they understood the questions.

Respondents also suggested that additional words be added so that one item read as follows: “If I am given the choice, I am not going to stop receiving paper bills and statements.” Respondents commented that if it were their choice to continue, they would continue to receiving paper bills and statements. However, they thought that it was possible that at some point in the future banks and organizations might force them to receive only electronic bills and suppress paper bills. The issue of choice was not relevant

to any of the other statements of resistance intentions as these intentions were considered to be under the control of the respondents.

4.1.2.3 Attitude of Resistance to Discontinuing the Paper Bill

Bansal and Taylor (2002) measured the “Attitude Toward Switching Bank Brands” with the six measures. Four of their items were adopted for the pre-test: ‘good-bad idea,’ ‘useless-useful,’ ‘harmful-beneficial’ and ‘foolish-wise.’ Two other items, while appropriate for measuring the “Attitude Toward Switching Bank Brands” (‘unpleasant-pleasant’ and ‘undesirable-desirable’), were deemed inappropriate by the respondents for the measurement of the “Attitude of Resistance to Discontinuing the Paper Bill.” Respondents commented that a bank brand and a paper bill were not the same type of object. Bank brands are created by an organization and as such, may have attributes that could be described by the respondent using bi-polar scales of pleasantness or desirability. The paper bill was considered to be an object which lacked the qualities of a brand and in the context of the respondent’s financial management process could not be meaningfully described by the respondent as pleasant or desirable. To replace ‘unpleasant-pleasant’ and ‘undesirable-desirable,’ two measures suggested by Osgood et al., 1957) (‘worthless to worthwhile’ and ‘unnecessary to necessary’) were used. Informed by the literature, the selection of ‘worthless to worthwhile’ and ‘unnecessary to necessary’ seemed appropriate in the context of EBPP in terms of the value associated to the paper bill by the consumer.

4.1.2.4 Attitude Toward the Object

“Authenticity” and “Aesthetics” were selected as the constructs to represent “Attitude Toward the Object” in the situation of EPBB. “Authenticity” has typically been

measured on a bi-polar scale with the end points labelled as ‘inauthentic-authentic’ (Beverland, 2005; Grayson & Martinec, 2004). However, this single item scale doesn’t provide an explanation of the foundation of the belief of “Authenticity” of the paper bill.

In addition to using the bi-polar adjective measure of ‘authentic-inauthentic,’ “Authenticity” was measured more elaborately in this research based on the work of Peterson (2005), Groves (2001), and Trilling (1971, 1972). These researchers suggest that authenticity of a document flows from its ability to provide evidence of a transaction, an agreement or a dialogue between two actors. In research on bill payment and presentment conducted for postal administrations, paper bills produced by organizations were considered to ‘look more official’ or ‘more real’ than something consumers printed on their own printer (Australian Post, 2006; Royal Mail, 2005). Based on the research by postal administrations, three adjectives to describe the evidentiary support provided by the paper bill were presented to the respondents in this research (‘best evidence,’ ‘indisputable,’ ‘legitimate’). The paper bill also was viewed by respondents in this research as a link to the organizations with which they do business. The paper bill was considered tangible and was physical evidence of the sender’s right to request payment. One respondent summarized the general attitude of the group by saying: “I like the original (paper bill) because it’s real and I’m sure it’s from that company.” Moreover, respondents considered that it was much more difficult to ‘fake’ a paper bill than an electronic bill. The paper bill was considered to provide many clues that the bill was from a legitimate company. The look and feel of the paper bill provided one type of evidence, but respondents also used the timing of the bill and the accuracy and specificity of the account information to verify its genuineness. Respondents thought that each of the

adjectives ('best evidence', 'indisputable,' and 'legitimate') reflected different aspects of why they thought the paper bill was authentic. Therefore, the items reflecting the different adjectives were retained in the final questionnaire.

The "Need for Touch" (NT) scale (Peck and Chiders, 2003) was considered as a measurement of "Aesthetics." The NT scale was rejected for two reasons. The scale tests the haptic sense but not the visual sense. Moreover, the NT scale measures the outcome of touching objects rather than the sensory-driven basis for the reaction to tangible objects. In this study, four constructs ("Redundancy," "Warranty," "Permanence," "Facilitates Financial Work Processes") encompassed the outcome reactions associated with paper bills. Upon receiving the mock-up of the paper credit card statement, respondents commented that they liked a paper bill or statement because "it looks real and feels good to have in my hand." Not only the feel of the piece of paper but the visual elements within a paper document, such as text colour, format, graphics, and layout have been shown to affect the readability and functioning of the document (Sellen & Harper, 2003; Ganier & Barcenila, 2007; Wallace & Yates-Mercer, 1980).

A paper bill was considered by the respondents in this research to be a formal obligation for payment with potentially serious outcomes for failing to pay. A typical comment was, "If I fail to pay, dire consequences may result." Consistent with these consequences, a paper bill is considered to be an official and important document. Respondents identified a document as a bill using both visual elements such as layout (summary of what is owed and detailed transaction listing in a chart), text format (font size used), graphics (company logo), and tactile quality of the paper (seemingly non-standard size, tear-off portion and the weight of the paper). They were observed during

the discussion turning over the mock-up of the paper credit card statement to look at the legal text in small font on the back of the statement.

For respondents, the “Aesthetics” of the paper bill can be categorized as: (1) the specific way in which information is received and presented on the paper, and (2) the specific visual and haptic elements that signal that the bill is distinct from other documents. As a result of the clear distinction made by the respondents during the pre-test, the “Aesthetics” construct was split into “Aesthetics-Form” and “Aesthetics-Function.” Both were made part of the final framework.

Two scales (Unimportant-Important and Irrelevant-Relevant), reflecting the role of the paper bill in a household’s financial management process, were evaluated by the respondents. Relevance was preferred by these respondents, rather than Importance. They suggested that the link between the haptic and visual qualities was best expressed through the Relevance of these qualities to the management of their household finances. The Importance scale appeared to overstate the significance of the paper bill in the management of their household finances. Therefore the scale used in the final questionnaire was Relevance.

As a result of the pre-test, wording changes were made to the items measuring “Authenticity.” The construct of “Aesthetics” was split into two constructs: “Aesthetics-Form” and “Aesthetics-Function.” A scale (Irrelevant-Relevant) was selected to evaluate the two “Aesthetics” constructs.

4.1.2.5 Utilitarian Outcomes

Four constructs (“Permanence,” “Facilitates Financial Work Processes,” “Redundancy,” “Warranty”) represented “Utilitarian Outcomes” in this study in the

situation of EPBB. The permanency of paper documents and their ability to facilitate work processes have been studied previously (Harper & Sellen, 1995; Savic, 1995). However, this study represents the first time that these two functions have been studied as part of understanding the consumers' attitudes and behaviour toward the paper bill. New measures were developed specifically for this research. "Redundancy" (the paper bill may act as a back-up system) and "Warranty" (the paper bill may act as assurance of the consumer's rights in a problem resolution situation with banks or organizations) are constructs conceptualized for the first time in the relation to the paper bill and new measures were developed specifically for this study.

Items developed to measure "Facilitates Financial Work Processes" were based on qualitative research around office documents (Harper & Sellen, 1995), document design (Granier & Barcenilla, 2007), and from research published by postal administrations (Australian Post, 2006; Royal Mail, 2005). In reviewing the mock-up of the paper credit card statement, the value of the information being on paper was apparent to, and easily expressed by the respondents. Immediately upon being given the mock-up of the paper credit card statement the respondents quickly began commenting on it. All respondents said that a paper bill or statement acts as a tangible trigger to remind the recipient to pay the bill. One respondent laughingly said that, "It is harder to forget if it's there looking at you." They considered the paper bill to be physical evidence of what is owed by them and that it was easier to use than the electronic bill because it was readily available at any time regardless of the availability of their computer or the internet. Several respondents commented that, "I don't have to log on to view my bill." Respondents thought it was easier to find something on paper than it was to find it in the computer. Some valued the

paper bill as having documentary purposes in terms of claiming business expenses or if they were audited by the Canadian Revenue Agency. Earlier in reporting the results of the pre-test respondents indicated that having multiple credit cards and the bank accounts made them prefer the paper bill. Here respondents also preferred the paper bill as a way to manage their use of multiple bill payment methods (e.g. ABM, telephone, online). Based on the respondents' comments in the pre-test, wording changes were made to the items measuring "Facilitates Financial Work Processes." One additional item was added to reflect the respondents' preference for the paper bill when using multiple bill payment methods.

Items developed to measure "Permanency" were based on the three characteristics of recorded information suggested by Savic (1995). The characteristics were that the information: (1) remained usable, (2) was available for some period of time, and (3) was under the control of the holder of the document. Respondents in this study indicated that they wanted control over how long they kept the bills. A comment made frequently was, "I can file the paper bill and keep it as long as I want." Some respondents expressed concern over the ease of manipulating electronic documents and saw the paper bill as a permanent record that cannot be altered without being detected. No additional items were added to "Permanency" as a result of the pre-test.

Items developed to measure the "Redundancy" of the paper bill came from understanding how consumers might use the paper bill to manage the risks in electronic transactions (back-up for technological failure or temporary lack of access) (Gerrard et al, 2006; Perpermans et al., 1996; Tan & Teo, 2000). The measures included three items that reflected how the paper bill acted as a redundancy system: (1) as a back up to the

electronic information in case the computer or the internet was inaccessible, (2) as a back-up should the electronic notification (e-mail) be deleted or not noticed in the respondent's inbox, and (3) as a place to record the confirmation number from the screen when a bill was paid online.

The new items developed to measure "Warranty" followed from the work of Yousafzai et al. (2000) on the importance of structural assurances (measured as guarantees) as antecedents to the adoption of online banking. Mantal (2002) found that the absence of paper documents increased consumer resistance to online banking because that absence was considered by consumers to impede error resolution and reduce their perceived control over their finances. Respondents thought it was particularly important to receive a paper bill when they were dealing with a company for the first time. Others wanted the paper bill as evidence in case of a dispute or problem saying, "If something goes wrong and the organization makes a mistake I have a track record and can prove what I am saying." No additional items to measure "Warranty" were added as a result of the pre-test however the wording of the items was modified to reflect the respondents' comments.

4.1.2.6 Normative Outcomes

"Opinions of Family and Friends" and "Opinions of Companies and Banks" were the constructs tested in the situation of EPBB to represent "Normative Outcomes." The perception of the reaction of these two groups who might affect the consumers' actions has been tested in research on the adoption of banking methods with inconsistent findings (Liao et al., 1999; Curran et al., 2003). As part of the pre-test, respondents were asked to indicate whether the items for the "Opinions of Family and Friends" should remain in the

final questionnaire and whether separate items were required for each of banks, credit card and utility organizations.

Respondents felt that the “Opinions of Family and Friends” were not as relevant as those of employees. Research on the adoption of banking methods has had inconsistent findings concerning the impact of family and friends on behaviour (Liao et al., 1999; Shih & Fang, 2005; Tan & Teo, 2000). Financial information and management were deemed by these respondents to be private matters and not widely discussed. Therefore, the items measuring the “Opinions of Family and Friends” were removed from the questionnaire.

“Opinions of Companies and Banks” were seen as very important by these respondents, and they stated that the reactions of employees formed part of the reason for their resistance to discontinuing the paper bill. Not only were separate questions for banks, credit card companies and organizations deemed appropriate by the respondents but in fact respondents suggested additional items that evaluated the role of the paper bill in the situation of problem resolution and the respondents’ perceptions of the reactions from organizations and banks if they didn’t have the paper bill.

In resisting the adoption of online banking, the importance of paper documents as evidence in dispute resolution was specifically raised by the respondents during the pre-test. Respondents in the pre-test research reported on the importance of being able to present the paper bill to the organization or bank when attempting to resolve a problem. The paper bill appeared to these respondents to be stronger evidence than their verbal report. The paper bill may also act as a way for respondents to maintain or gain control in

the relationship with the organization or bank by reducing their dependency on the organization or bank for information.

Having the appropriate and official financial documents was identified in research (Hilgert & Hogarth, 2003) as a measure of good financial management practices on the part of consumers. Researchers have concluded that consumers anticipate banks' and organizations' reactions based on their experience in trying to resolve problems (Kuisma et al., 2007; Sarel & Marmorsten, 2003). Moreover, in the situation of electronic bill payment and presentment, the perception of the anticipated approval or disapproval of bankers or organizations was based, in part, on consumers' perception of the assistance they had received with their problems in the past (N'Goala, 2007). Official paper receipts created by banks or organizations have been discussed in focus group research as indisputable evidence of a completed transaction (Kuisma et al., 2007).

Based on these findings on respondent concerns of not having the paper bill, the perceptions of the opinions or reactions of relevant organizational employees toward the respondent's attitudes under four scenarios were tested: (1) the paper bill is absent because the respondent doesn't have it and the employee's reaction makes the respondent feel insecure ("Insecure"), (2) the respondent has a problem with his or her accounts as reflected by the bill or statement that requires joint consumer-bank problem resolution ("Bank Reaction"), (3) the paper bill is absent because the respondent doesn't have it and the respondent believes the employee would think s/he is financially irresponsible ("Irresponsible"), and (4) having the paper bill avoids the respondent having to depend on the organization for the information ("Aversion to Dependence"). The framework was revised to reflect the changes suggested by the respondents during the pre-test.

4.1.2.7 *Self-Identity Outcomes*

The “Self-Identity Outcomes” construct signifies the influence of self-concept on behaviour (Eagly & Chaiken, 1993). In the situation of EBPP, the salient “Self-Identity Outcomes” that relate to the behaviour of resistance to discontinuing the paper bill were reflected by consumers’ financial and technical risk tolerance.

Respondents evaluated two scales that measure the financial risk tolerance aspect of self-identity -- the “Financial Risk Tolerance” scale (Chang, 1994) and the “Money Conservation” scale (Troisi & Christopher, 2006). Both of the scales measure a tendency to be conservative with financial management. The “Financial Risk Tolerance” scale has been more widely used than the “Money Conservation” scale. However the “Financial Risk Tolerance” scale is only a single item scale and would be problematic in the SEM analysis. Since the respondents in the pre-test thought both scales worked well, the “Money Conservation” scale was used to measure “Financial Risk Tolerance.”

Parasuraman (2000) developed the “Technology Readiness Index” (TRI) as a way to evaluate the readiness of consumers to adopt new technologies. TRI has four factors: (1) optimism, reflecting a positive view of technology and a belief that it offers people increased control, flexibility, and efficiency in their lives, (2) innovativeness, reflecting a tendency to be a technology pioneer and thought leader; (3) discomfort, based on a perceived lack of control over technology and a feeling of being overwhelmed by it, and (4) insecurity and distrust of technology and scepticism about its ability to work properly. Parasuraman (2000) identified the “Insecurity” factor as one of the inhibitors to technology readiness. Therefore “Technical Risk Tolerance” was operationalized using six items from the item pool related to the “Insecurity” factor of the TRI index.

4.1.2.8 *Habit*

Habits may be formed through ongoing recurrence of a behaviour (Verville, 1988). The frequency of a past behaviour has been shown to predict habit strength and to have a direct impact on behaviour (Ouellette & Wood, 1998). As recommended by Eagly and Chaiken (1993), “Habit” in this study was operationalized based on Triandis (1970) using four items reflecting automatic behaviour that develops from direct experience and frequency of occurrence. The pre-test respondents did not have any suggestions for changes to the items measuring “Habit.”

The tables in Appendix D summarize the changes to wording of the items, the scale changes and the number of items as a result of the pre-test. Following the modifications to the items, a final questionnaire with 90 items (plus six demographic questions) was produced (Appendix E).

Figure 4.1 presents the final framework with the constructs identified after Stage 1 of the research. Figure 3.2 presented in Chapter 3 contained 14 constructs. As a result of the pre-test, one construct (“Opinions of Family and Friends”) was deleted, three constructs (“Insecure,” “Irresponsible,” “Aversion to Dependence”) were added and one construct “Aesthetics” became two constructs (“Aesthetics-Form,” “Aesthetics-Function”). In Stage 2, a total of 17 constructs will be tested in the Final Framework for the Resistance to Discontinuing the Paper Bill.

Figure 4.1 – Final Framework for Resistance to Discontinuing the Paper Bill – Modified as a Result of the Pre-test

Table 4.2 presents the final list of hypotheses tested in this research. As result of the pre-test, the number of hypotheses to be tested, increased from 37 to 57 and reflected the revised framework relationships. All relationships are posited as positive.

Table 4.2 – Final Hypotheses Tested After Modification as a Result of the Pre-test

H₁ Habit Set	
H _{1a1}	Habit is positively related to Authenticity of the paper bill
H _{1a2}	Habit is positively related to Aesthetics-Form of the paper bill
H _{1a3}	Habit is positively related to Aesthetics-Function of the paper bill
H _{1b}	Habit is positively related to the attitude of resistance to discontinuing the paper bill
H _{1c}	Habit is positively related to the behaviour of resistance to discontinuing the paper bill
H₂ – Attitude-Object Set	
H _{2a1-4}	Authenticity of the paper bill is positively related to the perception of redundancy of the paper bill
H _{2a1-5}	Authenticity of the paper bill is positively related to the perception of warranty of the paper bill
H _{2a1-6}	Authenticity of the paper bill is positively related to the perception of permanence of the paper bill
H _{2a1-7}	Authenticity of the paper bill is positively related to the perception that the paper bill facilitates financial work processes
H _{2a2-4}	Aesthetics-Form of the paper bill is positively related to the perception of redundancy of the paper bill
H _{2a2-5}	Aesthetics-Form of the paper bill is positively related to the perception of warranty of the paper bill
H _{2a2-6}	Aesthetics-Form of the paper bill is positively related to the perception of permanence of the paper bill
H _{2a2-7}	Aesthetics-Form of the paper bill is positively related to the perception that the paper bill facilitates financial work processes
H _{2a3-4}	Aesthetics-Function of the paper bill is positively related to the perception of redundancy of the paper bill
H _{2a3-5}	Aesthetics-Function of the paper bill is positively related to the perception of warranty of the paper bill
H _{2a3-6}	Aesthetics-Function of the paper bill is positively related to the perception of permanence of the paper bill
H _{2a3-7}	Aesthetics-Function of the paper bill is positively related to the perception that the paper bill facilitates financial work processes

**Table 4.2 – Final Hypotheses Tested After
Modification as a Result of the Pre-test (Continued)**

H₂ – Attitude-Object Set (Continued)	
H _{2b1-8}	Authenticity of the paper bill is positively related to bank employees' reactions toward the consumer when resolving a problem
H _{2b1-9}	Authenticity of the paper bill is positively related to employees' reactions toward the consumer not having the paper bill when there is a problem, making the consumer feel insecure
H _{2b1-10}	Authenticity of the paper bill is positively related to employees' reactions toward the consumer not having the paper bill when there is a problem, making the consumer feel financially irresponsible
H _{2b1-11}	Authenticity of the paper bill is positively related to the consumers' aversion to being dependent on the organization for information
H _{2b2-8}	Aesthetics-Form of the paper bill is positively related to bank employees' reactions when resolving a problem
H _{2b2-9}	Aesthetics-Form of the paper bill is positively related to employees' reactions toward the consumer not having the paper bill when there is a problem, making the consumer feel insecure
H _{2b2-10}	Aesthetics-Form of the paper bill is positively related to employees' reactions toward the consumer not having the paper bill when there is a problem, making the consumer feel financially irresponsible
H _{2b2-11}	Aesthetics-Form of the paper bill is positively related to the consumers' aversion to being dependent on the organization for information
H _{2b3-8}	Aesthetics-Function of the paper bill is positively related to bank employees' reactions toward the consumer when resolving a problem
H _{2b3-9}	Aesthetics-Function of the paper bill is positively related to employees' reactions toward the consumer not having the paper bill when there is a problem, making the consumer feel insecure
H _{2b3-10}	Aesthetics-Function of the paper bill is positively related to employees' reactions toward the consumer not having the paper bill when there is a problem, making the consumer feel financially irresponsible
H _{2b3-11}	Aesthetics-Function of the paper bill is positively related to the consumers' aversion to being dependent on the organization for information
H _{2c1-10}	Authenticity of the paper bill is positively related financial risk tolerance
H _{2c1-11}	Authenticity of the paper bill is positively related technical risk tolerance
H _{2c2-10}	Aesthetics-Form of the paper bill is positively related financial risk tolerance
H _{2c3-10}	Aesthetics-Function of the paper bill is positively related financial risk tolerance
H _{2c2-11}	Aesthetics-Form of the paper bill is positively related technical risk tolerance
H _{2c3-11}	Aesthetics-Function of the paper bill is positively related technical risk tolerance

**Table 4.2 – Final Hypotheses Tested After Modification as a
Result of the Pre-test (Continued)**

H₂ - Attitude-Object Set (Continued)	
H _{2d1}	Authenticity of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H _{2d2}	Aesthetics-Form of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H _{2d3}	Aesthetics-Function of the paper bill is positively related to the attitude of resistance to discontinuing the paper bill
H₃ – Outcome Set	
H _{3a4}	Redundancy is positively related to the attitude of resistance to discontinuing the paper bill
H _{3a5}	Warranty is positively related to the attitude of resistance to discontinuing the paper bill
H _{3a6}	Permanence is positively related to the attitude of resistance to discontinuing the paper bill
H _{3a7}	Facilitates Financial Work Processes is positively related to the attitude of resistance to discontinuing the paper bill
H _{3b8}	Bank employees' reactions toward the consumer when resolving a problem is positively related to the attitude of resistance to discontinuing the paper bill
H _{3b9}	Employees' reactions toward the consumer not having the paper bill when there is a problem making the consumer feel insecure is positively related to the attitude of resistance to discontinuing the paper bill
H _{3b10}	Employees' reactions toward the consumer not having the paper bill when there is a problem making the consumer feel financially irresponsible is positively related to the attitude of resistance to discontinuing the paper bill
H _{3b11}	Consumers' aversion to being dependent on the organization for information is positively related to the attitude of resistance to discontinuing the paper bill
H _{3c8}	Bank employees' reactions toward the consumer when resolving a problem is positively related to the intention to resist discontinuing the paper bill
H _{3c9}	Employees' reactions toward the consumer not having the paper bill when there is a problem making the consumer feel insecure is positively related to the intention to resist discontinuing the paper bill
H _{3c10}	Employees' reactions toward the consumer not having the paper bill when there is a problem making the consumer feel financially irresponsible is positively related to the intention to resist discontinuing the paper bill

**Table 4.2 – Final Hypotheses Tested After Modification as a
Result of the Pre-test (Continued)**

H₃ – Outcome Set (Continued)	
H _{3c11}	Consumers' aversion to being dependent on the organization for information is positively related to the intention to resist discontinuing the paper bill
H _{3d12}	Financial risk tolerance is positively related to the attitude of resistance to discontinuing the paper bill
H _{3d13}	Technical risk tolerance is positively related to the attitude of resistance to discontinuing the paper bill
H _{3e12}	Financial risk tolerance is positively related to the intention to resist discontinuing the paper bill
H _{3e13}	Technical risk tolerance is positively related to the intention to resist discontinuing the paper bill
H₄ – Attitude Set	
H _{4a}	The attitude of resistance to discontinuing the paper is positively related to the intention to resist discontinuing the paper bill
H _{4b}	The attitude of resistance to discontinuing the paper is positively related to the behaviour of resistance to discontinuing of the paper bill
H₅ – Intention-Behaviour	
H ₅	The intention to resisting discontinue the paper bill is positively related to the behaviour of resistance to discontinuing the paper bill

4.2 Stage 2 - Data Collection

This research was conducted to understand the influences on the consumer's resistance to discontinuing the paper bill and to test the proposed Final Framework for the Resistance to Discontinuing the Paper Bill (Figure 4.1). Stage 2 of the Methodology chapter discusses: (1) the research design and (2) the data screening and analysis procedures.

On the basis of the pre-test in Stage 1, the final data collection questionnaire was refined to test the proposed framework. The data for the second stage of the research were collected using an online survey with Canadian online bill payers. The rationale for

selecting online bill payers who live in Canada for this research was three-fold. First, online bill payers have already demonstrated their ability to adopt new behaviours online. Second, consumers who already pay bills online are likely to be aware of and have the means to access the electronic bill presentment. The evolution of electronic handling of bills began with the introduction and adoption of online bill payments. Thus, electronic bill payment adoption is a necessary first step to e-billing acceptance and therefore, necessarily precedes it. It is a necessary but not sufficient step to electronic bill presentment and discontinuance of the paper bill. Consumers can accept electronic payment without electronic presentment but they can't do the latter before the former. Also, they can accept electronic bill presentment without discontinuing the paper bill. Therefore, selecting online bill payers maximizes the chances of finding the behaviour of both accepting electronic bill presentment and also of discontinuing receiving the paper bill. Selecting online bill payers also facilitates differentiating between resisters and non-resisters to discontinuing the paper bill. Third, the penetration of online banking and online bill payment in Canada is among the highest in the world for this behaviour. Sixty-three percent of Canadians who use the internet pay their bills online (Statistics Canada, 2008). Therefore, using Canada as the population also increases the chances of identifying adopters and non-adopters of e-bill presentment and of discontinuance of the paper bill.

The sample of 10,000 was drawn at random from the full panel of approximately 350,000 members of a commercial online panel representative of online consumers. The commercial online panel is managed by Leger Marketing. The secure website is hosted in Canada, and the data are stored in a database in Canada. Members of the online panel

volunteer to participate in research studies and receive a reward, either payment in the form of money or points toward merchandise for the time expended.

An online panel was selected as the data collection method because an online panel achieves a representative sample of sufficient size at a reasonable cost. The validity of data collected from online panels has been questioned due to external validity, coverage error, and response rates (Chakrapani, 2007). External validity is the most problematic issue. Coverage error has less impact on the sampling frame representativeness of the population of interest for this research because the respondents under study must be an online bill payer in order to qualify for the study. Using an online panel increases the probability of a representative sample of consumers who use online banking for bill payment and presentment. The response rate of panel members is typically higher than random recruiting.

Respondents from the panel were invited using e-mail. Respondents were screened based on having paid at least one bill online in the past year. For the purpose of this research, the bill and statement type that the respondent was asked to think about during the survey was the one that occurs regularly and was sent to the respondent by a bank or an organization: (cable (television, internet), telephone (home, mobile, internet, wireless, satellite), electricity, hydro, municipal taxes, oil, gas, water, sewage, personal or household services, credit card statements and bank account statements).

The bill could be received by the respondent either on paper, electronically or both. The respondent was asked not to answer questions on the basis of statements of account, such as, transaction receipts that were handed to them at a retail location.

Investment statements and confirmations were also excluded from this research due to the considerably lower incidence and frequency of their occurrence in the population.

Data were collected over a 10-day period in February 2009 using a structured web-based questionnaire. The average length of completion was 12 minutes. The initial final sample size was 1054. The next chapter presents the results of data screening, descriptive analysis and the results of the Structural Equation analysis.

5.0 RESULTS

The results chapter is presented in three parts. Section 5.1 presents the results of the preliminary data screening where the data were explored for outliers and measures of central tendency. Next, the descriptive analysis of the research is presented in Section 5.2 to provide an overview of the data. In Section 5.3, the Structural Equation Modeling analysis procedures and results are presented.

5.1 Data Screening

Data were screened for skewness, kurtosis, question and case missing values, and outliers. As part of data screening, the data were examined for representativeness and the possibility of non-response bias. The demographic characteristics of the respondents in this study were examined and then compared to the demographic characteristics of a sample of online Canadians (Statistics Canada, 2009).

Data on six demographic characteristics were collected in this survey (gender, age, education, income, geographic location and employment status). Tables that present the details of the demographic data for the study respondents can be found in Appendix F. Respondents in this sample (Canadians who pay at least one bill online in the past year) were, on average, 46.0 years of age, with an average household income of \$82,228 a year. Males comprised 46.4% of the sample and females 54.6%. A university education was held by 43.7% of the sample and 35% had a college diploma. More than two-thirds of the sample was employed, either full-time (57.8%) or part-time (10.7%). The remainder of

the sample was retired (16.4%), a homemaker (6.5%), a student (3.7%) or unemployed (3.1%).

The respondents in this study differed demographically from a Statistics Canada Labour Force Survey sample (2009) on four characteristics (see tables in Appendix G). The study respondent had an older average age, was more likely to have completed college or university, had a higher average income and was less likely to live in the Atlantic region than the total Canadian population. Some differences were anticipated because unlike the Statistics Canada online respondents, the respondents in this study were screened for paying at least one bill online in the past year. Recent demographic data describing consumers who pay bills online were not available. However, the finding that the respondents in this study were of older average age is similar to available data on the age of consumers who bank online. An older average age was reported in online banking research based on data from the Michigan Institute of Social Research survey (Lee et al. 2003) and in published findings from a commercial survey of consumers who bank online (ComScore, Media Metrix, 2008). Based on the comparison of the study data to Statistics Canada data and available data on age and online banking, it was concluded that the data were suitably representative of the online bill payer.

According to Statistics Canada (2008), 63% of online Canadians paid at least one bill online in the past year. Therefore, of the original 10,000 sample, it was expected that 6,300 would meet the screening criteria of paying at least bill online in the past year. Out of 6,300 possible respondents who qualified for the survey, 1054 surveys were obtained. A 17% response rate may indicate that an assessment of non-response bias should be conducted, however, in this study non-response bias was not considered an issue. One

thousand surveys was the target number of completed surveys given to the research firm who collected the data. It was expected that it would take roughly three weeks to achieve the target number of 1000. However, the target number was achieved in 10 days. The speed of response from respondents was interpreted as indicating a good interest in the survey topic among the respondents. Once the target number had been achieved (with a five percent overage) the survey website was closed to further responses. By closing the survey website after 10 days, respondents who might have completed the survey were not able to do so. Non-response bias is said to occur when a significant number of people in the survey sample fail to respond and have relevant characteristics that differ from those who do respond (Dillman, 2000). Based on the type of respondents (innovative), their speed of response and the choice of the research firm to close the survey website once the target number has been obtained, the impact of non-response bias on the data in this study of resistance behaviour was judged to be low.

Normal distribution is necessary for most statistical procedures (Muthen & Kaplan, 1985). A conservative rule-of-thumb suggests that absolute values of kurtosis greater than 10 indicate a problem, as does skewness greater than 3.0 (Hair et al., 1998; Kline, 2005). Skewness and kurtosis tests for all items indicated that the data were generally normally distributed (Appendix H). The skewness of all items in this research was very much smaller than 3 except for income (6.4). The skewness of the income item can be accounted for by the high proportion of missing values (33.3%) for this item. A high proportion of missing values is typical of income (Moore & Loomis, 2002). The issue of missing values will be dealt with following the discussion of kurtosis.

Only three items had three kurtosis values greater than 10 (Income, Kurtosis = 69.2; Number of Electronic Bills Printed Out, Kurtosis = 26.6; Number of Paper Bills That Could Be or Are Printed Electronically, Kurtosis = 11.8). Positive kurtosis indicates too few cases in the tail of the Bell curve. The large kurtosis values that were observed for three items were due to a third each of respondents not providing an answer (Income), not receiving an electronic bill (Number of Electronic Bills Printed Out) or believing that they could not receive an electronic bill (Number of Paper Bills That Could Be or Are Printed Electronically). Therefore, it can be concluded that kurtosis is not a problem in this research.

The proportion of missing values for this sample was 0.02. One solution in dealing with missing values would be to delete any cases with missing values. The major disadvantage of removing cases with missing values is the potential introduction of bias because the remaining cases are not a random sample of all cases (Little and Rubin, 2002). In this study, since the proportion of cases with missing values is so low compared to the overall sample size, the risk of introducing a bias into the data with the removal of cases is minimized.

A case with missing values was removed from the sample if the case had more than 15% missing values, or if the missing values were the critical behavioural measures (number of paper or electronic bills received). Of the 1054 cases collected, 25 cases contained more than 15% missing values and were removed from the sample. Two cases that contained missing values for the behavioural measures (the number of paper or the electronic bills received) were also removed. In addition to the cases removed for missing values, cases where the respondent gave a response of 0 to both the number of paper bills

and the number of electronic bills, were also removed. As a result, 18 more cases were removed.

In order to qualify for this study, respondents were screened for receiving at least one bill online in the past year. Selecting online bill payers maximizes the chances of finding the behaviour of both accepting e-bill presentment and also of discontinuing receiving the paper bill. Respondents who indicated 'no' to the screening question were not allowed to complete the questionnaire. Therefore, respondents who gave an answer of 'yes' to the screening question but then indicated in their questionnaires that they had received neither paper nor electronic bills in the past month or did not answer these questions did not qualify for the study because they lacked the behaviour that was being studied in this research.

In addition to examining each case for missing values, each item was also examined for missing values. Each item was checked to determine if there were systematic or non-random reasons for the missing values. Of the 90 items, 73 items had less than 5% missing values (most of the 73 items had less than 1% missing values), 16 items had between 5% and 10% missing values, and one item (income) had 32.6% missing values. The high proportion of missing values (32.6%) is typical of income (Moore & Loomis, 2002). The item wording was somewhat repetitive for the 12 items measuring the four constructs representing "Normative Outcomes" ("Insecure," "Bank Reaction," "Irresponsible," "Aversion to Dependence"), and it is possible that the respondents found the questions boring. Two items measuring the "Intention to Resist Discontinuing the Paper Bill" ('I am not going to stop printing out bills that I receive online' and 'I am not going to stop printing out bank account statements that I receive

online') were slightly above five percent missing values (6.3% and 5.6% respectively). Two items measuring the "Attitude of Resistance to Discontinuing the Paper Bill" were also slightly above five percent (5.2%, worthwhile-worthless and 6.0%, useful-useless). Therefore it can be concluded that the questionnaire was generally well-designed, not overly long and the wording of the questions and answers clear.

The data were screened for univariate outliers and only seven cases contained outliers. High value outliers were detected in two of items measuring the "Behaviour to Discontinuing the Paper Bill" (the number of paper bills received and the number of electronic bills received). The literature suggested three approaches to dealing with outliers (Stevens, 2002). Replacing the high value outliers with the maximum values from the remaining cases was the approach used in this research. Five cases were identified as receiving more than 30 paper bills each month. Thirty paper bills or less per month accounted for 99.5 percent of the cases, and therefore, the five outliers for the number of paper bills received were replaced with the maximum value of 30. Two cases had outliers in the number of electronic bills received (more than 15 electronic bills received). Fifteen bills or less accounted for 99.5 percent of the cases, and therefore, the two outliers of the number of electronic bills received were replaced with the maximum value of 15.

The Mahalanobis Distance Statistic tests that an observed random sample has a multivariate normal distribution. A conservative level of statistical significance is recommended for this test ($p < 0.001$) (Kline, 2005). Low p values indicate that the cases are outliers, and if these cases remain in the sample, they may have greater influence on the coefficients of the equations than the other cases. Visual inspection of each case with

low p values revealed proportionally more incidences of the answer of one (strongly disagree) or seven (strongly agree) across the respondents' answers than were found in the majority of the other respondents' answers. The items for which this repetitive answering occurred were those measuring "Intention to Resist Discontinuing the Paper Bill" and "Normative Outcomes." Answers at the top or bottom of the scale may reflect more strident positive or negative beliefs about giving up paper bills. Alternatively, the repetition of one or seven in response to a series of attitude statements may indicate that these respondents became habituated to the answer choices and gave the same answers to the questions without thinking out the answers (Dillman, 2000). Whether the greater number of answers at the top or bottom of the scale is due to more strident beliefs or giving the same answer without thinking, the most conservative approach would be to remove the cases. Therefore, 119 cases were eliminated from this study sample based on the Mahalanbois Distance Statistic.

In comparison with the rest of the sample, the group of 40 respondents aged 18 to 24 had considerably fewer bills. The average number of bills for the total sample of 1054 was 6.3, while those 18 to 24 years of age received only 2.9 bills. Consumers who are 18 to 24 years of age are often not included in research on bill payments because of having fewer financial obligations and therefore fewer bills (Sathye, 1999). Unlike other consumer products where adults aged 18 to 24 can be an appropriate unit of analysis, most consumers aged 24 years of age and younger have different financial obligations, are managing a limited amount of money, and have fewer dependents than older adults. Research conducted over a 17-year period (Pitney Bowes, 2006) showed that the quantity of mail and bills increased appreciably around 25 years of age. Researchers (Grunier,

2010; Mandel, 2003; Pitney Bowes, 2006) indicate that when financial problems occur consumers who were 24 years of age or younger used family or friends as their financial backup system. Consumers 25 years of age and over use other types of back-up (e.g. credit cards, bank loans, lines of credit) in part because of the increase in the size and number of their financial obligations. Therefore as is the case in most studies of financial services, the group aged 18 to 24 years of age in this study was excluded from the data analysis.

In summary, the data were screened for skewness, and kurtosis, question and case missing values and outliers. As part of data screening, the data were examined for representativeness and the possibility of non-response bias. Taking the most conservative approach to data screening, cases with a high percentage missing values (25 cases), cases where the behavioural items critical to this study were either not recorded or an answer of zero was recorded for both paper and electronic bills received (20 cases), the group aged 18 to 24 years (40 cases), and cases with a high Mahalanobis Distance Statistic (119) were removed from the data set. The impact of these decisions was to reduce the initial sample from 1054 to 850. The sample of 850 was considered more than adequate for SEM analysis of the proposed model (Kline, 2005; Tabachnick & Fidell, 1996).

5.2 Descriptive Analysis

The descriptive analysis covers an overview of key behavioural information and a summary of the attitude statements by construct.

5.2.1. Banking Behaviour

Consistent with other research (Canadian Bankers Association, 2009) respondents in this study use a variety of banking methods in a typical month for their banking requirements (e.g. money transfers, bill payment, cash withdrawals) (Table 5.1). Almost all respondents (93.4%) use online banking and 83.2% use ABM. Less than half of these respondents use a traditional bank branch (40.9%), roughly one-in-ten use an in-store bank in a grocery store (10.6%) or telephone banking (8.8%).

Table 5.1 – Bank Methods Used in a Typical Month

Bank Method	N= 850 %
Online	93.4
ABM	83.2
Traditional Bank Branch	40.9
In-Store Bank at a Grocery Store	10.6
Telephone	8.8

A myriad of methods are used for the payment of bills and credit card accounts (Table 5.2). Bill payment methods used in a typical month can be divided into two categories, those that are directly managed by the respondent (online, ABM, branch banking, telephone, mail and in-person drop-off) and those which are indirectly managed by the respondent (automatic deduction, automatic payment from credit card).

Online bill payment is used by 93.0% of the respondents to pay bills in a typical month. Roughly half (51.3%) of the respondents have one or more bill payments automatically deducted from their bank account. Less than three-in-ten (29.5%) have the payment automatically applied to their credit card. Other bill payment methods are used

by a lower percentage of respondents: by cheque sent in the mail (21.9), ABM (11%), at a bank or in-store branch at a grocery store (9% and 0.9% respectively), by cheque dropped off at the company (6.2%), or by telephone (5.4%).

Table 5.2 – Bank Methods Used to Pay Bills in a Typical Month

Bank Method	N=850 %
Directly Managed by Respondent	
Online	93.0
ABM	10.6
Traditional Bank	9.3
In-Store Bank at a Grocery Store	0.9
Telephone	5.4
By Cheque sent in the Mail	21.9
By Cheque dropped off at the Company	6.2
Indirectly Managed By Respondent	
Automatic Deduction from your Bank Account	51.3
Automatic Payment from your Credit Card	29.5

5.2.2 Behaviour of Resistance to Discontinuing the Paper Bill

The data for the behavioural measures are presented in Table 5.3. Each month, respondents receive an average of 6.6 paper and 1.9 electronic bills. The mean number of paper bills (Mean = 6.6) found in this study was consistent with published information (McNeish, 2006). The proportion of paper bills received to total bills received was 0.8. Respondents indicated that 3.6 bills of the 6.6 bills that are received on paper are or could be received electronically.

Of the 567 respondents who received an electronic bill in the past month, they reported receiving on average 1.9 electronic bills and printing out 0.5 bills on paper. Only 26% of the bills received electronically were printed out on paper. The pre-test

respondents reported that when they had chosen to only receive a bill electronically, or the organization mandated that the bill could only be received electronically, the respondents indicated that they would print out the ‘electronic only’ bill.

Table 5.3 – Mean and Standard Deviation for Items Measuring the Behaviour of Resistance to Discontinuing the Paper Bill and Statement

Construct and Items	Mean	SD
Behaviour of Resistance to Discontinuing the Paper Bill and Statement		
All Respondents	N=850	
Number of Paper Bills and Statements Received in Past Month	6.6	4.0
Number of Electronic Bills and Statements Received in Past Month	1.9	2.2
Number of Credit Cards	3.0	2.0
Number of Bank Accounts	2.2	1.1
Proportion of Paper Bills and Statements Received divided by Total Paper and Electronic Bills and Statements Received	0.8	0.2
Number of Paper Bills and Statements Received That Are/Could Be Received Electronically	3.6	2.5
Among Those Who Received at Least One Electronic Bill or Statement	N=567	
Number of Electronic Bills and Statements Received that are Printed Out	0.5	0.9
Respondents recorded actual number in answer to the items above		
All Respondents	N=850	
Open Envelopes	5.2	2.0
Throw out Paper Bills and Statements Without Opening Envelope	1.5	1.3
File Envelopes Without Opening For Future Reference	2.1	1.8

Scale: 1= Not All My Usual Behaviour to 7= Very Much My Usual Behaviour

When a bill was received in both electronic and paper format, the electronic bill was not printed out since the respondents only required one paper copy. Therefore,

printing out only 26% of the bills electronically would be consistent with only printing those electronic bills that are not also received as paper bills.

Respondents had, on average, 3.0 credit cards and 2.2 bank accounts (Table 5.3). The greater the number of credit cards, the greater the number of paper and electronic bills received. An explanation for the association between the number of credit cards and the number of statements received is that multiple credit card statements may be the result of being a customer of multiple organizations (banks and other organizations). No relationship between the number of bank accounts and the number of statements received was detected. The lack of relationship between the number of bank accounts and the number of statements received may be due to the fact that most major Canadian banks have consolidated customers' multiple accounts onto one statement.

Most respondents indicated that opening the envelopes that contained the paper bill reflected their typical behaviour whereas throwing out the envelopes or filing without opening did not reflect their typical behaviour (Table 5.3).

5.2.3 Intention of Resisting Discontinuing the Paper Bill

Seven items were used to measure aspects of the "Intention of Resisting Discontinuing the Paper Bill" (Table 5.4). Three of the seven items had mean scores at or above the scale mid-point. Respondents agreed more strongly (Mean = 4.5) with the statement about not discontinuing printing a receipt when they pay a bill at an Automated Banking Machine than about not discontinuing receiving paper bills and paper account statements (Means = 4.2 and 4.0 respectively).

Table 5.4 – Mean and Standard Deviation for Items Measuring Intention to Resist Discontinuing the Paper Bill and Statement

Construct and Items	Mean	SD
Intention to Resist Discontinuing The Paper Bill and Statement	N=850	
I am not going to stop printing out the paper receipt at the Automated Banking Machine when I pay a bill	4.5	2.4
If I am given the choice, I am not going to stop receiving paper bills	4.2	2.3
If I am given the choice, I am not going to stop receiving paper bank account statements	4.0	2.4
If my bank were to stop sending me a paper statement, I would print one out at the branch or Automated Banking Machine	3.5	2.4
I am not going to stop printing out bank account statements that I receive online	3.2	2.3
I am not going to stop printing out bills that I receive online	3.1	2.2
I would pay a fee rather than stop receiving a paper bill or statement from a company	2.2	1.7

Scale: 1= Strongly Disagree to 7=Strongly Agree

Of the 68.2% of sample who received an electronic bill, 97.4% also received a paper bill. Because the respondents continue to receive the paper bill, respondents were not in a situation where they needed to print the electronic bill and therefore were less likely to agree with the statements ‘I am not going to stop printing out bills that I receive online’ (Mean = 3.1) and ‘I am not going to stop printing out banking account statements that I receive online’ (Mean = 3.2) than they were to agree with the statements about not stopping the receipt of paper bills or paper account statements.

5.2.4 Attitude of Resistance to Discontinuing the Paper Bill

Respondents were asked to evaluate the “Attitude of Resistance to Discontinuing the Paper Bill” using five items representing the merit of refusing to stop receiving paper bills and paper statements (Table 5.5). The two document types were evaluated separately

by the respondents. The level of agreement with the items was similar for both bills and statements. Given the similarity in scores, only the items related to the paper bill were used in subsequent analysis.

The mean scores were slightly above the scale mid-point (Midpoint = 4) for the items measuring the “Attitude of Resistance to Discontinuing the Paper Bill.” This pattern was seen also in the response to the items measuring the “Intention to Resist Discontinuing the Paper Bill.”

Table 5.5 – Mean and Standard Deviation for Items Measuring the Attitude of Resistance to Discontinuing the Paper Bill

Construct and Items	Mean	SD
Attitude of Resistance to Discontinuing the Paper Bill	N=850	
Worthless -- Worthwhile	4.6	1.9
Useless -- Useful	4.6	1.8
Foolish -- Wise	4.5	1.9
A Bad Idea -- A Good Idea	4.3	2.0
Unnecessary -- Necessary	4.3	1.9
Attitude of Resistance to Discontinuing the Paper Bank Account Statement		
Worthless -- Worthwhile	4.5	2.0
Foolish -- Wise	4.5	2.0
Useless -- Useful	4.5	1.9
A Bad Idea -- A Good Idea	4.4	2.1
Unnecessary -- Necessary	4.4	2.0

Would you say refusing to stop receiving the paper bill is...scale from 1-7

5.2.5 Attitude toward the Object

The Attitude Toward the Object was represented by three constructs (“Authenticity,” “Aesthetics-Function,” “Aesthetics-Form”) and each will be discussed in turn. Respondents’ level of agreement with the items measuring “Authenticity” was very consistent and strong (all items had means of five or above) (Table 5.6a). The highest

level of agreement (Mean = 5.6) was with the statement that ‘Paper bills and statements provide valid evidence in the case of a dispute or disagreement with the company or bank.’ In addition, respondents strongly agreed that the paper bill was indisputable evidence and legitimate proof of their routine financial transactions. Moreover, the respondents agreed that, for many services, the paper bill was the only tangible link with many organizations with whom they do business.

Table 5.6a - Mean and Standard Deviation for Items Measuring Authenticity

Construct and Items	Mean	SD
Authenticity	N=850	
Paper bills and statements provide valid evidence in the case of a dispute or disagreement with the company or bank	5.6	1.8
I consider paper bills and statements to be legitimate proof of my routine financial transactions	5.2	2.0
I believe that paper bills and statements are indisputable evidence of my routine financial transactions	5.1	2.0
For many services, paper bills and statements are the only tangible link I have with the company or bank with whom I do business	5.1	2.0
I believe that paper bills and statements are the best evidence of my routine financial transactions	5.0	2.0

Scale: 1= Strongly Disagree to 7=Strongly Agree

Respondents were asked to evaluate the items measuring “Aesthetics-Function” and “Aesthetics-Form” based on their management of their household finances (Table 5.6b). “Aesthetics-Function” included items related to information presentation (detailed transaction information, information on paper, information lay-out, presence of the company logo, and transmission (the bill arriving in the mail). The mean scores for three of the “Aesthetics-Function” were above five, indicating the importance of the paper bill

as a roadmap in the respondents' management of their household finances. One item was slightly above the mid-point of 4 (comes in the mail) and one item (company logo) was slightly below the mid-point.

“Aesthetics-Form” included the font size and colour, size and weight of paper, and the feel of the paper used. All items for “Aesthetics-Form” were lower than the midpoint, indicating a general lack of agreement that these characteristics of the paper bill were relevant to the management of the respondents' household finances.

Table 5.6b - Mean and Standard Deviation for Items Measuring Aesthetics-Function and Aesthetics-Form

Construct and Items	Mean	SD
Aesthetics-Function	N=850	
Contains detailed transaction information	5.7	1.6
That the information is on paper	5.3	1.9
The way the information is laid out	5.1	1.9
That the bill or statement comes in the mail	4.3	2.2
The company logo that is on it	3.8	2.2
Aesthetics-Form		
Font size used in printing the text	3.4	2.0
The size of the paper that the company uses	2.4	1.8
Weight of the paper that the company uses	2.1	1.6
The bill or statement is printed in colour	2.0	1.5
The feel of the paper that the company uses	1.9	1.5

Scale: 1= Strongly Disagree to 7=Strongly Agree

Although “Aesthetics-Form” may be less relevant to the management of household finances, “Aesthetics-Form” describes the characteristics of the paper bill that identifies it as a document that was produced and sent by a bank or billing organization and that makes it distinct from other non-financial paper documents.

5.2.6 Utilitarian Outcomes

Four constructs (“Permanence,” “Warranty,” “Facilitates Financial Work Processes,” “Redundancy”) represented the “Utilitarian Outcomes” in the framework of resistance to discontinuing the paper bill (Tables 5.7a and 5.7b).

Table 5.7a – Mean and Standard Deviation for Items Measuring Permanence and Facilitates Financial Work Processes

Construct and Items	Mean	SD
Permanence	N=850	
Unlike electronic bills and statements, I make the decision how long I keep paper bills and statements for future reference	5.6	1.9
Paper bills and statements can be accessed and read at a future time regardless of changes in computer software or hardware	5.5	1.8
Paper bills and statements are a better way to receive information because they can’t be changed or altered without detection	4.8	2.1
Facilitates Financial Work Processes		
I can compare month over month paper bills and statements without much effort	5.2	2.0
I use the paper bill as a reminder to pay my bill	5.1	2.1
The paper bill is important to me as proof to a business or the Canadian Revenue Agency in order to claim business expenses or tax deductions	5.1	2.1
Paper bills and statements are an important part of the way I manage my household finances	4.9	2.2
I believe that the paper bill or statement is the best way to keep accurate financial records	4.8	2.1
I find it quicker and easier to scan through paper bills and statements to find the information I need	4.8	2.1
I prefer paper bills and statements because I don’t have to be at my computer and on the internet to look at them	4.5	2.2
The more bank methods (e.g. ABM, branch, online, telephone) I use, the more I prefer to receive paper bills and statements	4.1	2.2

Scale: 1= Strongly Disagree to 7=Strongly Agree

Each of the items measuring the four constructs designate a potential function that paper bill may play in the consumers’ financial management process. The process begins

with the arrival of the paper bill acting as a reminder that a bill payment is due, to a place to record the confirmation number when paying a bill online, to the use of the bill as proof of payment for reimbursement of expenses for business or tax purpose through to archiving and retrieval of the bill. Overall, the paper bill acts as a mechanism through which consumers control their financial information.

Table 5.7b – Mean and Standard Deviation for Items Measuring Redundancy and Warranty

Construct and Items	Mean	SD
Redundancy	N=850	
It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I can't access my computer or the internet	5.1	2.1
When I pay bills online, it is best to use the paper bill to record the confirmation number from the screen	5.1	2.2
It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I delete the electronic notification or don't notice it in my inbox	5.0	2.1
Warranty		
I feel more comfortable receiving a paper bill from a company that I don't know well	5.4	1.8
I feel more comfortable receiving a paper bill from company that I deal with infrequently	5.2	1.9
When utility companies make mistakes, I need the paper bill as proof that the transaction occurred incorrectly	5.1	2.0
When credit card companies make mistakes, I need the paper credit card statement as proof that the transaction occurred incorrectly	5.1	2.1
When banks make mistakes, I need the paper statement as proof that the transaction occurred incorrectly	5.1	2.0

Scale: 1= Strongly Disagree to 7=Strongly Agree

The strongest level of agreement was for those items in Tables 5.7a and 5.7b that suggested the ways in which respondents use the paper bill to exert their control over access to, risk to, and problems with, their financial information. Managing access to the

information was reflected in the items about making the decision in the length of time the bills were kept (Mean = 5.6), the ability to access the information at any time in the future (Mean = 5.5), and recording the confirmation number from the screen onto the paper bill when the bill is paid online (Mean = 5.1). Managing risk was reflected in the items about being more comfortable receiving a paper bill from companies they didn't know well (Mean = 5.4) or dealt with infrequently (Mean = 5.2). Managing problems was reflected in items about being able to compare their information over time (Mean = 5.2), and the paper bill being a back-up to the bill payment process in case of mistakes by the bank (Mean = 5.1), credit card company (Mean = 5.1), or utility company (Mean = 5.1).

5.2.7 Normative Outcomes

Respondents indicated the strongest agreement with items presenting situations where the assistance of a bank is required to resolve a problem ("Reaction of the Bank") or where the absence of the paper bill meant that the respondent had to depend on the bank or organization to provide them with the information (Aversion to Dependence on the Organization") (Table 5.8).

Respondents agreed that the attitudes of bank, credit card or utility company employees influence the respondents' insecurity beliefs when the respondent didn't have the paper bill ("Insecure"). However the scores were below the mean for the influence of the attitudes of employees of banks, credit card or utility companies on the respondents' feelings of being irresponsible for not having the paper bill ("Irresponsible").

**Table 5.8 - Mean and Standard Deviation for Items
Measuring Normative Outcomes**

Construct and Items	Mean	SD
Bank Reaction	N=850	
When I have a problem with my account that is not my fault, having the paper statement increases my confidence in dealing with the bank	5.3	2.0
When I have a problem with my account that is not my fault, having my paper statement increases the likelihood that the bank will believe me	5.1	2.0
When I have a problem with my account that is not my fault, my bank's willingness to help me increases if I have the paper statement	4.9	2.0
Aversion to Dependence on the Organization		
It concerns me that if I didn't keep the paper bill, I would have to depend on the credit card company to provide me with the information	5.1	2.1
It concerns me that if I didn't keep the paper bill, I would have to depend on the utility company to provide me with the information	5.0	2.1
It concerns me that if I didn't keep the paper statement, I would have to depend on the bank to provide me with the information	5.0	2.1
Insecure		
If I didn't have the paper statement when I had a problem with my credit card account, their reaction would make me feel insecure	4.5	2.0
If I didn't have the paper bill when I had a problem with my utility company account, their reaction would make me feel insecure	4.4	2.0
If I didn't have the paper statement when I had a problem with my bank account, their reaction would make me feel insecure	4.4	2.0
Financially Irresponsible		
If I did not have the credit card statement when I have a problem with my account, the credit card company would think that I was financially irresponsible	3.9	2.1
If I didn't have the paper statement when I have a problem with my account, the bank would think that I was financially irresponsible	3.8	2.0
If I did not have the paper bill when I have a problem with my billing account, the utility company would think that I was financially irresponsible	3.8	2.0
Scale: 1= Strongly Disagree to 7=Strongly Agree		

These findings suggest that the feelings of others about the respondents' financial irresponsibility play less of role in resisting discontinuing the paper bill than the respondents' loss of confidence when faced with the reactions of bank employees, their

feelings of insecurity when faced with the reactions of credit card company, utility company employees or bank employees and aversion to being dependent on the organizations or banks.

5.2.8 Self-Identity Outcomes

In the situation of EBPP, the salient “Self-Identity Outcomes” that relate to the behaviour of resistance to discontinuing the paper bill were reflected by two constructs: “Technical Risk Tolerance” and “Financial Risk Tolerance.”

“Technical Risk Tolerance” was operationalized using the six items that form the ‘Insecurity Toward Technology’ factor (Parasuraman, 2000). The ‘Insecurity’ is one of four factors that make up the “Technology Readiness Index” (TRI). Parasuraman (2002) tested TRI with a sample of college students and young professionals (college graduates up to age 35), only some of whom were users of the internet. The respondents in this study were 24 years of age and older, were internet users and had paid at least one bill online in the past year. Based on the behavioural indicators of both using the internet and paying a bill online, it might be expected that the level of ‘Insecurity’ would be lower in the respondents in this study, and that is what was found. While statistical analysis of the differences was not possible because of the two different scales used, the overall mean was 4.4 (7-point scale) for the six items found in this study and was closer to the mid-point of the scale than what was found by Parasuraman (overall mean, 4.0 on a 5-point scale). The respondents in this study were more secure in their use of technology than those in Parasuraman’s study.

The highest and lowest levels of agreement with the items measuring “Technical Risk Tolerance” reflected the respondent’s level of experience in conducting online

transactions (Table 5.9). Respondents believed it to be important to check for errors in online transactions but, at the same time, were not overly concerned about conducting financial transactions online. The respondents' highest level of agreement was for the importance of checking automated information in order to ensure that the computer was not making mistakes (Mean = 5.4). Respondents were much less likely to agree that they don't think it was safe to give out credit card information online (Mean = 3.9).

Table 5.9 – Mean and Standard Deviation for Items Measuring Technical Risk Tolerance

Construct and Items	Mean	SD
Technical Risk Tolerance	N=850	
Whenever information gets automated, it's important to check carefully that the computer is not making mistakes	5.4	1.6
I do not feel confident doing business with a company that can only be reached online	4.5	2.0
I worry that the information I send over the Internet will be seen by other people	4.4	1.8
Any business transaction that I do electronically should be confirmed later with something in writing on paper	4.3	2.0
When providing information over the Internet, I can never be sure it really gets to the right place	4.1	1.8
I do not consider it safe giving out my credit card number over the internet	3.9	1.8

Scale: 1= Strongly Disagree to 7=Strongly Agree

The high mean scores measuring "Financial Risk Tolerance" were consistent with studies that indicate that Canadians tend to be financially conservative (Adams, 2003). The highest mean scores were given to the attitudes regarding bill payment (paying bills promptly, Mean = 6.0 and paying immediately to avoid interest or penalties, Mean = 5.8) (Table 5.10). Note that the data were collected in February 2009 which was in the middle

of the global financial crisis that began in fall 2008 and continued into 2009. The impact of this crisis on these respondents may be reflected in the scores for the items measuring “Financial Risk Tolerance.”

Table 5.10 – Mean and Standard Deviation for Items Measuring Financial Risk Tolerance

Construct and Items	Mean	SD
Financial Risk Tolerance	N=850	
I always pay my bills promptly	6.0	1.3
I pay my bills immediately to avoid interest or penalties	5.9	1.5
I believe it is rude to inquire about a person’s salary	5.6	1.6
I always know how much I have in my savings and/or chequing accounts	5.5	1.5
I use my money very carefully	5.2	1.4
I prefer to save money because I’m never sure when things will collapse and I’ll need cash	5.1	1.4
I budget my money very well	5.0	1.6
My attitude toward money is very similar to that of my parents	4.8	1.7
I am proud of my ability to save money	4.8	1.7
I prefer to use cash or a debit card, rather than credit cards	4.4	2.2
I know to the penny how much money I have in my purse, wallet or pocket at all times	4.3	1.8

Scale: 1= Strongly Disagree to 7=Strongly Agree

5.2.9 Habit

The mean scores for the four items that make up “Habit” range from 5.5 to 6.2 (Table 5.11). The mean scores for the items measuring “Habit” were among the highest in the survey and reflected the extensive experience of these respondents with bill receipt. Fazio and Zanna (1981) indicated that direct and repeated behavioural experience forms strong habits. Respondents received bills, credit card statements and bank account statements regularly (most are monthly). These bills are important to the respondents as

they are for common-used household services such as: cable (television, internet), telephone (home, mobile, internet, wireless, satellite), electricity, hydro, municipal taxes, oil, gas, water, sewage, and personal or household services, as well as credit card statements and bank account statements.

Table 5.11 - Mean and Standard Deviation, for Items Measuring Habit

Construct and Items	Mean	SD
Habit	N=850	
I have been receiving paper bills and statements for a long time	6.2	1.4
I receive paper bills and statements automatically without any effort on my part	5.9	1.5
I receive paper bills and statements without having to consciously do anything	5.7	1.7
I receive paper bills and statements frequently	5.5	1.8

Scale: 1= Strongly Disagree to 7=Strongly Agree

5.2.10 Summary of Descriptive Data

Receiving bills is a regular occurrence for these respondents and one with which they have much experience. All respondents received paper bills each month while two-thirds of the respondents also received electronic bills. Consistent with the behavioural measures the mean scores for the items measuring “Habit” are among the highest in the survey reflecting the ongoing experience of these respondents with paper and electronic bill receipt. Respondents paid their bills using a variety of banking methods. Almost all respondents used online bill payment in the past month.

The paper bill was evaluated by these respondents in terms of its “Authenticity,” “Aesthetics-Form” and “Aesthetics-Function.” The mean scores for “Authenticity” were five and above. The highest level of agreement was with the statement that paper bills

and statements provided valid evidence in the case of a dispute or disagreement with the company or bank. The items for “Aesthetics-Function” suggested the importance of the paper as a roadmap or guidebook for respondents’ actions when managing their household finances. Respondents’ stronger agreement with the items measuring “Aesthetics-Function” than those measuring “Aesthetics-Form” suggested that “Aesthetics-Function” was more relevant to the management of the respondents’ household finances than “Aesthetics-Form.” While “Aesthetics-Form” may be less relevant to the management of household finances, “Aesthetics-Form describes the characteristics of the paper bill that identifies it as a document that was produced and sent by a bank or large billing organization, and makes it distinct from other non-financial paper documents.

Four constructs (“Permanence,” “Warranty,” “Facilitates Financial Work Processes,” “Redundancy”) represented the “Utilitarian Outcomes” in the framework. Each of the items measuring the four constructs designate a potential function that paper bill may play in the consumers’ financial management process. The process begins with the arrival of the paper bill acting as a reminder that a bill payment is due, to a place to record the confirmation number when paying a bill online, the use of the bill as proof of payment for reimbursement of expenses for business or tax purpose through to archiving and retrieval of the bill. In addition, the paper bill acts as a mechanism through which consumers control their financial information. The strongest level of agreement was for those items that suggested the ways in which respondents use the paper bill to exert their control over access to, risk to, and problems with, their financial information. While the paper bill appeared to be relevant and necessary in routine financial management process,

it appeared to assume an even larger role in the situation of problem resolution, possibly due to the respondents' need to maintain control of their financial information at all points during the process and to maintain their feeling of confidence when they have to deal with banks and organizations in a problem resolution situation.

Respondents indicated the strongest agreement with items presenting situations where the assistance of a bank is required to resolve a problem or where the absence of the paper bill meant that the respondent had to depend on the bank or organization to provide them with the information. Respondents agreed that the attitudes of bank, credit card or utility company employees influenced the respondents' insecurity beliefs when the respondent didn't have the paper bill. However, the scores are below the mean for the influence of the attitudes of the employees of banks, credit card or utility companies on the respondents' feelings of being irresponsible for not having the paper bill. These findings suggest that the perceived reactions of employees to the respondents' financial irresponsibility play less of a role in resisting discontinuing the paper bill than the respondents' feelings of insecurity and loss of confidence in reaction to the employees of organizations and banks as well as the respondents' aversion to being dependent on the organization or bank.

As experienced users of the internet and because they have multiple interactions with organizations and banks, these respondents understood the importance of checking for errors while not being overly concerned about conducting financial transactions online. The mean scores measuring "Financial Risk Tolerance" were consistent with studies that indicate that Canadians tend to be financially conservative (Adams, 2003).

The behavioural indicator of paying bills online and the demographic profile is that of respondents who would be considered by most researchers to be innovative and should be the least likely to be resistant to discontinuing the paper bill. The descriptive analysis of the data augments the theory presented in chapter 2 that the paper bill has meaning beyond the provision of financial information in order to discharge an individual's financial obligations to a bank or organization. The paper bill was not only found to be a relevant and necessary part of the way that respondents control their information in their routine financial management process but the paper bill was considered by respondents to have an essential role in problem resolution situations with banks and organizations. Section 5.3 further explored the data through Structural Equation Modeling analysis.

5.3 Structural Equation Modeling Analysis

Structural Equation Modeling analysis (SEM) was used to understand the influencing factors in the consumer's behaviour of resistance to discontinuing the paper bill and to test the Resistance to Discontinuing the Paper Bill Research Framework presented in Figure 4.1. SEM is a multivariate statistical procedure that simultaneously analyzes a measurement model and a structural model (Joreskog & Sorbom, 2004). A two-step process proposed by Kline (2003) was adopted for this analysis. All analyses employed the maximum likelihood (ML) estimation procedure of LISREL 8.8 (Joreskog & Sorbom, 2004). The covariance matrix was used as the input data for the analysis. Section 5.3.1 presents the results of the measurement model analysis and Section 5.3.2 presents the results of the structural model analysis.

5.3.1 Step 1 – Measurement Model Analysis

Prior to CFA, an exploratory factor analysis with oblique rotation and ML estimation was carried out to uncover the dimensions among all the indicators. Based on the eigenvalue greater than one rule and the scree plots, 17 factors were uncovered which explained 70.8% of variance. Tabachnick and Fidell (2001) suggest 0.32 as the minimum loading of an item and that a crossloading item is an item that loads at .32 or higher on two or more factors (Costello & Osborne, 2005). No indicators had cross loadings greater than 0.32 on more than one factor and all indicators were retained.

Confirmatory Factor Analysis (CFA) was used to further test the measurement model. The proposed measurement model contained 17 constructs. Each construct in the model was conceptualized as a latent construct and was measured by multiple indicators (Anderson and Gerbring, 1988; Kline, 2005). The proposed measurement model was formulated as congeneric, consisting of eleven unidimensional constructs. Each indicator loaded on one construct and the constructs were allowed to covary. All the indicators were proposed and tested as reflective of the constructs. To assess the quality of the measurement model, the convergent, discriminant and nomological validity of the constructs were examined (Anderson and Gerbring, 1988).

5.3.1.1 *Convergent Validity*

Convergent validity was assessed in two ways. The first approach involved Cronbach's α , a measure of the internal consistency of a set of indicators on a construct. Cronbach's α values over 0.5 are considered acceptable (Nunnally, 1967). The results presented in Table 2 in Appendix H indicate that all constructs meet the minimum of 0.5. The values ranged from 0.56 to 0.97.

Convergent validity was also assessed by estimating a 17-construct confirmatory measurement model, checking the standardized factor loadings and errors for all indicators, the Composite Reliability Coefficients (CRC) and the Average Variance Extracted (AVE). The CRC and AVE reflect the degree to which the indicators are homogeneous in their measurement of the construct. Lower values for the CRC and AVE may mean that the indicators are not sufficiently measuring the construct (Hair et al., 2005).

The results showed that all 90 indicators loaded on the expected constructs (Appendix J), but eight indicators had factor loadings below the minimum factor loading of 0.50 suggested by Hair et al. (2005). Seven (one indicator measuring the Intention construct and six indicators measuring the Behaviour construct) of the eight indicators were deleted. One indicator (The Number of Paper Bills That Are or Could Be Delivered Electronically) measuring the behavioural construct was not deleted. Table 5.12 presents the factor loadings for the indicators measuring the “Behaviour of Resistance to Discontinuing the Paper Bill.”

This research is the first time data have been collected to measure the “Behaviour of Resistance to Discontinuing the Paper Bill.” Data were collected based on eight indicators of this construct but except for one indicator (Proportion of Paper Bills Received with a loading of 0.70) the factor loadings were very low and ranged in absolute value from 0.02 to 0.41. For a CFA model with two or more factors, at least two indicators of a construct and three or four is preferred in order to avoid the model being empirically under-identified (Costello & Osborne, 2005; Kline, 2005). To ensure a minimum of two indicators of “Behaviour” the indicator, Number of Paper Bills That Are

or Could Be Delivered Electronically was retained in the measurement model because it had a factor loading of 0.41 and was the only indicator that was close to the recommended cut-off.

Table 5.12 - Standardized Factor Loadings, Composite Reliability and Average Variance Extracted for the Behaviour of Resistance to Discontinuing the Paper Bill Before and After Purification

Behaviour of Resistance to Discontinuing the Paper Bill		
	Original Indicators	Final Indicators
	Factor Loading	Factor Loading
Proportion of Paper Bills Received	0.70	0.8
Number of Paper Bills That Are or Could Be Delivered Electronically	0.41	0.43
Number of Electronic Bills Printed	0.14	--
Open Envelope	0.25	--
Throw Envelope Away Without Opening	-0.24	--
Keep Envelope Without Opening	-0.13	--
Number of Credit Cards	0.15	--
Number of Bank Accounts	0.02	--
Composite Reliability	0.19	0.56
Variance Extracted	0.10	0.41

The CRC was used to evaluate the level of internal reliability and the AVE was used to measure the convergent validity of the measurement model (Fornell & Larcker, 1981). The CRC was evaluated against the level recommended by Nunnally and Bernstein (1994) of 0.7 or greater. If the AVE is less than 0.5, the variance due to measurement error is larger than the variance captured by the construct, and the validity of the individual indicators is questionable (Bagozzi & Yi, 1988; Fornell & Larcker, 1981).

The CRC ranged from 0.83 to 0.98, well above the recommended minimum. The AVE ranged from 0.45 to 0.95 for all constructs except for the “Behaviour of Resistance to Discontinuing the Paper Bill” (0.19, 0.10). The factor loadings of the 17 constructs were examined to determine whether improvements could be made to the AVE (Costello & Osborne, 2005). An AVE of 0.5 is the minimum cut-off, and if the research contains sufficient indicators to measure a construct when indicators are deleted, a more stringent cut-off criteria can be applied (Bagozzi & Yi, 1988). Therefore, 27 indicators with AVEs between 0.5 and 0.7 were considered for deletion. After indicator deletion the CRC of all constructs remained unchanged at 0.83 or more and the CRC for the “Behaviour of Resistance to Discontinuing the Paper Bill” improved (0.56). The AVEs were 0.71 or greater and the AVE for the “Behaviour of Resistance to Discontinuing the Paper Bill” was improved (0.41). The low values for the CRC and AVE for the “Behaviour of Resistance to Discontinuing the Paper Bill” may impact subsequent model analysis because lower values suggest that the amount of variance that is captured by the construct may be less than the amount of variance due to measurement error.

A detailed table presenting the number of indicators for each construct before indicator deletion, the indicators deleted, and the final CRC and AVE values can be found in Appendix K. Table 5.13 presents the final CRC and AVE along with the model fit statistics (under the table). Researchers (Hair et al., 2003; Joreskog & Sorbom 1997; Kline, 2005) suggest that multiple statistics should be used to evaluate model fit. Six statistics were used to evaluate model fit in this research: (1) Chi-square (χ^2) and Normed Chi-square (χ^2/df), (2) Root Mean Square Error of Approximation (RMSEA), (3)

Standardized Root Mean Square Residual (SRMR), (4) Comparative Model Fit Index (CFI), (5) Normed Fit Index (NFI), and (6) Non-Normed Fit Index (NNFI).

Table 5.13 – Composite Reliability and Average Variance Extracted After Purification

Construct	Composite Reliability	Average Variance Extracted
Behaviour of Resistance to Discontinuing the Paper Bill	0.56	0.41
Intention to Resist Discontinuing the Paper Bill	0.86	0.60
Attitude of Resistance to Discontinuing the Paper Bill	0.90	0.75
Authenticity	0.96	0.82
Aesthetics-Form	0.86	0.67
Aesthetics-Function	0.79	0.56
Redundancy	0.91	0.76
Warranty	0.95	0.82
Permanence	0.87	0.68
Facilitates Financial Work Processes	0.95	0.74
Insecurity	0.98	0.95
Irresponsible	0.98	0.94
Opinion of Bank	0.95	0.87
Aversion to Dependence	0.98	0.94
Financial Risk Tolerance	0.87	0.69
Technical Risk Tolerance	0.82	0.54
Habit	0.88	0.64

χ^2 (df)=4604.91 (1633), $\chi^2/df=2.8$, RMSEA=0.046, RMSEA Confidence Interval=0.045-0.048, SRMR=0.035, CFI=0.99, NFI=0.99, NNFI=0.99

While the results of the Chi-square (χ^2) test are conventionally reported as part of SEM analysis, the interpretation of χ^2 can be problematic (Jöreskog, 1969) because it is sensitive to sample size. The effect of a large sample is that the null hypothesis may be rejected even for a well-fitting model. The Normed Chi-square statistic takes into account sample size and model complexity. Browne and Cudeck (1993) recommend that values for the Normed Chi-square should be less than five, while values between two and three

are very good. Due to the large sample size of this study, the Chi-Square statistic was significant (4604.91). However, the Normed Chi-Square (calculated as the ratio of the Chi-Square value to the degrees of freedom) of 2.8 was well below the recommended cut-off point of 5.

The RMSEA is a parsimony-adjusted index measure of fit with a built-in correction for model complexity (Kline, 2005). A RMSEA value of 0.05 or less indicates a good fit of the model (Kline, 2005). However, values to 0.08 are considered acceptable (Bentler, 2007; Hu & Bentler, 1999; Steiger, 1990). The RMSEA of the measurement model was 0.046 indicating a good fitting model.

SRMR values less than 0.08 indicate good model fit (Kline, 2005). The SRMR of the measurement model was 0.035, well below the accepted norm. CFI assesses the improvement in the fit of the model under study in comparison to a baseline or independence model and should be greater than 0.9. NFI and NNFI assess model fit in hypothetical replication samples of the same size and randomly drawn from the same sample under study (Kline, 2005). NFI and NNFI should be 0.9 or greater. In this study, NNFI and CFI were 0.99 and the NFI was 0.98. Overall, the results of the measurement model analysis indicate good model fit and hence good convergent validity.

5.3.1.2 Discriminant Validity

The next step was to assess the discriminant validity of the measurement model. Discriminant validity measures the extent to which a latent construct is different from another latent construct (Campbell and Fiske, 1959). Two approaches were used. The first approach compared the AVE and the squared correlation of any constructs and checked that the AVE was larger than the squared correlation (Fornell & Larcker, 1981).

Table 1 in Appendix L presents the results of all comparisons. Table 5.14 presents the seven of the 256 construct pairs that did not meet criteria proposed by Fornell & Larcker (1981).

Table 5.14 - Average Variance Extracted and Squared Correlations of the Constructs for Selected Relationships Where the Squared Correlations Between the Pairs of Constructs Was Larger Than the AVE

Relationship	AVE For Pairs of Constructs	Squared Correlations Between Pairs of Constructs	Absolute Difference Between AVE and Squared Correlations
a) Authenticity -- Redundancy	0.82	0.85	0.03
b) Authenticity -- Facilitates Financial Work Processes	0.78	0.81	0.03
c) Aesthetics Function -- Authenticity	0.74	0.81	0.07
d) Redundancy -- Permanence	0.75	0.77	0.02
e) Facilitates Financial Work Processes -- Permanence	0.71	0.76	0.05
f) Facilitates Financial Work Processes -- Redundancy	0.78	0.79	0.01
g) Behaviour -- Habit	0.53	0.59	0.06

Note: the letters (a-g) visually identify the relationship of the constructs in the table in Appendix N

Of the seven comparisons between the AVE and the squared correlations where the squared correlations are larger than the AVE, five have a difference between them of 0.03 or less and two comparisons have a difference between them of 0.06 and 0.07. Therefore, the exceptions to discriminant validity of all the constructs were few and small.

A second test of inter-construct correlation (Anderson & Gerbing, 1988) was also used. In this test the inter-correlations of the constructs are compared to each other to

determine if the confidence intervals of the inter-correlations contain a value of 1. None in this research did. Based on the results of the two procedures there is strong support for the conclusion that the constructs have satisfactory discriminant validity.

5.3.1.3 Nomological Validity

A construct has high nomological validity if it associates with other constructs consistent with established expectations (Peter, 1981). The inter-construct correlations supported the theory that sixteen of the constructs positively related to one and other as expected. The correlation of the seventeenth construct, the “Attitude of Resistance to Discontinuing the Paper Bill,” with every other construct was very low. The correlations range from 0.02 to 0.14 (Appendix M). Therefore, the measurement model was reevaluated for its model fit, convergent validity and discriminant validity with the “Attitude of Resistance to Discontinuing the Paper Bill” removed. Removal of the attitude construct had little impact on the factor loadings, indicator errors, CRC and AVE (Appendix N), discriminant validity (Appendix L – Table 2) and the model fit statistics (Table 5.15).

Table 5.15 – Comparison of Fit Statistics for the Original and the Revised Model with the Attitude of Resistance to Discontinuing the Paper Bill Removed

	Original Model	Revised Model with the Attitude of Resistance Removed
χ^2 (df)	4604.91 (1633)	4337.80 (1419)
$\chi^2 / (df)$	2.8	3.1
RMSEA	0.046	0.049
RMSEA Confidence Interval	0.045-0.046	0.048-0.051
SRMR	0.035	0.037
CFI	0.99	0.99
NFI	0.99	0.99
NNFI	0.99	0.99

Overall, the model was found to have good nomological validity. With or without the attitude-to-behaviour construct, the fit statistics for the measurement model exceeded the minimum acceptance levels, which indicated that the model provided a good fit to the data. As the result of measurement model testing, the nomological validity of the “Attitude of Resistance to Discontinuing the Paper Bill” is of concern, however, the construct was retained in the initial test of the proposed structural model due to its theoretical importance in the original Composite Attitude-Behaviour Framework (Eagly & Chaiken, 1993).

5.3.1.4 Summary of Measurement Model Analysis

The measurement model was first evaluated for the convergent, discriminant and nomological validity of the constructs. The results showed that all indicators loaded on the expected constructs with significant factor loadings. After indicator deletion, the CRC and AVE greatly exceeded the minimum criteria. The one exception to the overall strong results for the convergent validity was the construct of “Behaviour of Resistance to

Discontinuing the Paper Bill.” A strong result for nomological validity was also observed. The one exception to the overall strong results for nomological validity was the “Attitude of Resistance to Discontinuing the Paper Bill”, which was found to have low correlation with all other constructs. The “Attitude of Resistance to Discontinuing the Paper Bill” was retained in the measurement model with consideration to be given to its removal based on results of testing of the structural model. Overall, the measurement model was found to satisfy the conditions for convergent, discriminant and nomological validity of the constructs, and the model fit statistics indicated a good fit. The next step was to analyze the structural model.

5.3.2 Step 2 - Structural Model Analysis

With the positive outcomes of the measurement model analysis discussed above, analysis of the structural model proceeded. The proposed framework was posited as a recursive model with 16 endogenous latent constructs (“Authenticity,” “Aesthetics,” “Redundancy,” “Warranty,” “Permanence,” “Facilitates Financial Work Processes,” “Financial Risk Tolerance,” “Technical Risk Tolerance,” “Attitude of Resistance to Discontinuing the Paper Bill,” “Intention to Resist Discontinuing the Paper Bill,” “Behaviour of Resistance to Discontinuing the Paper Bill”) and one exogenous latent construct (“Habit”). The validity of the hypothesized model was assessed by examining the indices of model fit, the proportion of variance accounted for by the dependent constructs, and the number, and proportion of significant structural path coefficients in the hypothesized direction (Hulland et al., 1996; MacCallum & Austin, 2000).

5.3.2.1 Model Fit Indices

Figure 5.1 shows the results of the structural model analysis with the fit statistics (presented below the figure) and the proportion of variance accounted for by the dependent constructs presented for each of the paths of the structural model (the R^2 for each equation is beside or underneath its dependent construct). The Normed Chi-Square of 4.0 was well below the recommended cut-off point of 5 or less (Browne & Cudeck, 1993). Other fit indices, including the RMSEA (0.059), SRMR (0.088), CFI (0.99), NFI (0.98), and NNFI (0.99) were within acceptance values. It was concluded that the data fit the structural model well.

Figure 5.1 – Model of the ‘Behaviour of Resistance to Discontinuing the Paper Bill’

χ^2 (df)=7017.02 (1772), χ^2 /df=4.0, RMSEA=0.059, RMSEA Confidence Interval=0.058-0.060, SRMR=0.088, CFI=0.99, NFI=0.98, NNFI=0.99

5.3.2.2 Variance Explained

The proportion of variance explained generally supported a well fitting model, with four exceptions (Table 5.16).

Table 5.16 – Variance Explained of the Dependent Constructs

Independent Constructs	Dependent Construct	R²
Habit, Intention To Resist Discontinuing the Paper Bill, Attitude of Resistance to Discontinuing the Paper Bill	Behaviour of Resistance to Discontinuing the Paper Bill	0.59
Attitude of Resistance to Discontinuing the Paper Bill, Bank Reaction, Insecure, Irresponsible, Aversion to Dependence, Financial Risk Tolerance, Technical Risk Tolerance	Intention to Resist Discontinuing the Paper Bill	0.27
Redundancy, Permanence, Warranty, Facilities Financial Work Processes, Authenticity, Aesthetics-Form, Aesthetics-Function, Habit	Attitude of Resistance to Discontinuing the Paper Bill	0.00
Habit	Authenticity	0.60
Habit	Aesthetics-Form	0.03
Habit	Aesthetics-Function	0.43
Authenticity, Aesthetics-Form, Aesthetics-Function	Redundancy	0.62
Authenticity, Aesthetics-Form, Aesthetics-Function	Warranty	0.55
Authenticity, Aesthetics-Form, Aesthetics-Function	Permanence	0.61
Authenticity, Aesthetics-Form, Aesthetics-Function	Facilities Financial Work Processes	0.60
Authenticity, Aesthetics-Form, Aesthetics-Function	Bank Reaction	0.53
Authenticity, Aesthetics-Form, Aesthetics-Function	Insecure	0.41
Authenticity, Aesthetics-Form, Aesthetics-Function	Irresponsible	0.27
Authenticity, Aesthetics-Form, Aesthetics-Function	Aversion To Dependence	0.53
Authenticity, Aesthetics-Form, Aesthetics-Function	Financial Risk Tolerance	0.02
Authenticity, Aesthetics-Form, Aesthetics-Function	Technical Risk Tolerance	0.16

The independent constructs (“Redundancy,” “Permanence,” “Warranty,” “Facilities Financial Work Processes,” “Authenticity,” “Aesthetics-Form,” “Aesthetics-Function,” “Habit”) explained none of the variance of “Attitude of Resistance to Discontinuing the Paper Bill.”

Three other dependent constructs (“Technical Risk Tolerance,” “Financial Risk Tolerance,” “Aesthetics-Form”) had low variance explained by their independent constructs. “Habit” accounted for 3% of the variance of “Aesthetics-Form.” Two percent of the variance in “Financial Risk Tolerance” and 16% of the variance in “Technical Risk Tolerance” was accounted for by “Authenticity,” “Aesthetics-Form” and “Aesthetics-Function.”

5.3.2.3 Path Coefficients

The significance of each of the paths was examined. The path coefficients and significance of each path in the original model are summarized in Tables 5.17 – 5.20. Thirty-four of fifty-seven paths were statistically significant. The five hypotheses sets were examined in turn.

Four of five of the path coefficients from “Habit” were significant and positive (Table 5.17). The path from “Habit” to “Attitude of Resistance to Discontinuing the Paper Bill” was not significant.

**Table 5.17 – Path Coefficients and Significance of the
Habit Set of Hypotheses**

H₁ - Habit		Path Coefficient	T Value
H _{1a1}	Habit → Authenticity	0.78*	20.74
H _{1a2}	Habit → Aesthetics-Form	0.18*	4.68
H _{1a3}	Habit → Aesthetics-Function	0.66*	11.30
H _{1b}	Habit → Attitude of resistance to discontinuing the paper bill	-0.17	-1.98
H _{1c}	Habit → Behaviour of resistance to discontinuing the paper bill	0.67*	13.99

* Significant

Of the 33 paths in the Attitude-Object set of hypotheses, 24 paths were significant and all, but four, were positive. Each of the constructs (“Authenticity,” Aesthetics-Function,” “Aesthetics-Form”) was reviewed in turn. Table 5.18a presents the path coefficients and significance for “Authenticity.” All but one path was significant and positive. The path to “Attitude of Resistance to Discontinuing the Paper Bill” was non-significant.

**Table 5.18a - Path Coefficients and Significance of the
Attitude-Object (Authenticity) Set of Hypotheses**

H₂ - Attitude-Object (Authenticity) Set		Path Coefficient	T Value
H _{2a1-4}	Authenticity→Redundancy	0.78*	26.88
H _{2a1-5}	Authenticity→Warranty	0.36*	11.98
H _{2a1-6}	Authenticity→Permanence	0.68*	19.74
H _{2a1-7}	Authenticity→Facilitates financial work processes	0.76*	22.19
H _{2b1-8}	Authenticity→Bank Reaction	0.39*	13.04
H _{2b1-9}	Authenticity→Insecure	0.25*	7.82
H _{2b1-10}	Authenticity→Irresponsible	0.08*	2.28
H _{2b1-11}	Authenticity→Aversion to Dependence	0.39*	13.36
H _{2c1-10}	Authenticity→Financial risk tolerance	0.17*	3.98
H _{2c1-11}	Authenticity→Technical risk tolerance	0.09*	2.03
H _{2d1}	Authenticity→Attitude of resistance to discontinuing the paper bill	-0.13	-0.29

*Significant

Nine of the eleven paths from “Aesthetics-Function” were significant and positive (Table 5.18b). Two paths from “Aesthetics-Function” were not significant, including the path to “Attitude of Resistance to Discontinuing the Paper Bill.”

Table 5.18b - Path Coefficients and Significance of the Attitude-Object (Aesthetics-Function) Set of Hypotheses

H₂ - Attitude-Object (Aesthetics-Function) Set		Path Coefficient	T Value
H _{2a3-4}	Aesthetics-Function→ Redundancy	0.27*	9.85
H _{2a3-5}	Aesthetics-Function→ Warranty	0.72*	12.68
H _{2a3-6}	Aesthetics-Function→ Permanence	0.37*	10.24
H _{2a3-7}	Aesthetics-Function→Facilitates financial work processes	0.26*	9.56
H _{2b3-8}	Aesthetics-Function→Bank Reaction	0.67*	12.89
H _{2b3-9}	Aesthetics-Function→Insecure	0.67*	12.56
H _{2b3-10}	Aesthetics-Function→Irresponsible	0.66*	12.01
H _{2b3-11}	Aesthetics-Function→Aversion to Dependence	0.65*	13.04
H _{2c3-12}	Aesthetics-Function→Financial risk tolerance	-0.01	-0.33
H _{2c3-13}	Aesthetics-Function→Technical risk tolerance	0.50*	8.68
H _{2d3}	Aesthetics-Function→Attitude of resistance to discontinuing the paper bill	0.27	0.44

*Significant

Five of the eleven paths from “Aesthetics-Form” were significant (Table 5.18c). Four of the significant paths from “Aesthetics-Form” that lead to the “Attitude of Resistance to Discontinuing the Paper Bill,” “Facilitates Final Work Processes,” “Irresponsible” and “Financial Risk Tolerance” were positive. The remaining six paths were not supported (“Bank Reaction,” “Redundancy,” “Warranty,” “Permanence,” “Insecure,” “Aversion to Dependence,” “Technical Risk Tolerance”).

Table 5.18c - Path Coefficients and Significance of the Attitude-Object (Aesthetics-Form) Set of Hypotheses

H₂ - Attitude-Object (Aesthetics-Form) Set		Path Coefficient	T Value
H _{2a2-4}	Aesthetics-Form→Redundancy	0.03	1.55
H _{2a2-5}	Aesthetics-Form→Warranty	-0.03	-1.53
H _{2a2-6}	Aesthetics-Form→Permanence	0.04	1.68
H _{2a2-7}	Aesthetics-Form→Facilitates financial work processes	0.07*	3.88
H _{2b2-8}	Aesthetics-Form→Bank Reaction	-0.05*	-2.16
H _{2b2-9}	Aesthetics-Form→Insecure	0.04	1.66
H _{2b2-10}	Aesthetics-Form→Irresponsible	0.16*	5.33
H _{2b2-11}	Aesthetics-Form→Aversion to Dependence	0.0	0.14
H _{2c2-12}	Aesthetics-Form→Financial risk tolerance	0.09*	2.26
H _{2c2-13}	Aesthetics-Form→Technical risk tolerance	0.05	1.44
H _{2d2}	Aesthetics-Form→Attitude of resistance to discontinuing the paper bill	0.15*	3.47

*Significant

Of the 16 paths in the Outcome Set, four paths were significant (Table 5.19). The four significant paths from "Bank Reaction," "Insecure," "Aversion to Dependence," "Financial Risk Tolerance" and Technical Risk Tolerance" lead to the "Intention to Resist Discontinuing the Paper Bill." Two non-significant paths lead from "Irresponsible" and from "Technical Risk Tolerance" to the "Intention to Resist Discontinuing the Paper Bill." All ten paths leading to the "Attitude of Resistance to Discontinuing the Paper Bill" were non-significant.

Table 5.19 - Path Coefficients and Significance of the Outcome (Utilitarian, Normative and Self-Identity) Set of Hypotheses

H₃ – Outcome Set (Utilitarian, Normative and Self-Identity)		Path Coefficient	T Value
H _{3a4}	Redundancy→Attitude of resistance to discontinuing the paper bill	0.17	0.87
H _{3a5}	Warranty→Attitude of resistance to discontinuing the paper bill	0.08	0.31
H _{3a6}	Permanence→Attitude of resistance to discontinuing the paper bill	0.27	1.52
H _{3a7}	Facilitates Financial Work Processes →Attitude of resistance to discontinuing the paper bill	-0.06	-0.43
H _{3b8}	Bank Reaction→Attitude of resistance to discontinuing the paper bill	-0.08	-0.46
H _{3b9}	Insecure→Attitude of resistance to discontinuing the paper bill	-0.08	0.90
H _{3b10}	Irresponsible→Attitude of resistance to discontinuing the paper bill	-0.12	-1.72
H _{3b11}	Aversion to Dependence→Attitude of resistance to discontinuing the paper bill	-0.14	-0.95
H _{3c8}	Bank reaction→Intention to resist discontinuing the paper bill	0.20*	3.18
H _{3c9}	Insecure→Intention to resist discontinuing the paper bill	0.13*	2.76
H _{3c10}	Irresponsible→Intention to resist discontinuing the paper bill	0.02	0.54
H _{3c11}	Aversion to Dependence→Intention to resist discontinuing the paper bill	0.37*	6.06
H _{3d12}	Financial risk tolerance→Attitude of resistance to discontinuing the paper bill	0.04	1.03
H _{3d13}	Technical risk tolerance→Attitude of resistance to discontinuing the paper bill	0.00	0.07
H _{3e12}	Financial risk tolerance→Intention to resist discontinuing the paper bill	0.07*	2.8
H _{3e13}	Technical risk tolerance→Intention to resist discontinuing the paper bill	-0.01	-0.18

*Significant

Table 5.20 presents the path coefficients and significance for the attitude set of hypotheses. The path from the “Attitude of Resistance to Discontinuing the Paper Bill” to

the “Intention to Resist Discontinuing the Paper Bill” was significant. However, the path from the “Attitude of Resistance to Discontinuing the Paper Bill” to the “Behaviour of Resistance to Discontinuing the Paper Bill” was not significant, indicating the importance of intentions in the attitude-behaviour associative linkage.

Table 5.20 - Path Coefficients and Significance of the Attitude-Resistance Set of Hypotheses

H₄ – Attitude Set		Path Coefficient	T Value
H _{4a}	Attitude of resistance to discontinuing the paper→Intention to resist discontinuing the paper bill	0.06*	2.13
H _{4a}	Attitude of resistance to discontinuing the paper→Behaviour of resistance to discontinuing of the paper bill	-0.02	-0.61

*Significant

Table 5.21 presents the path coefficients and significance for the intention-behaviour hypothesis. The path linking the “Intention to Resist Discontinuing the Paper Bill” to the “Behaviour of Resistance to Discontinuing the Paper Bill” was significant.

Table 5.21 - Path Coefficients and Significance of the Intention-Behaviour Hypothesis

H₅ – Intention-Behaviour		Path Coefficient	T Value
H ₅	Intention to not discontinue the paper bill→Behaviour of resistance to discontinuing the paper bill	0.20*	4.41

*Significant

5.3.2.4 *Summary of the Structural Model Analysis*

The original framework was posited as a recursive model with 16 endogenous latent constructs and one exogenous latent construct. The validity of the original framework was assessed by examining the indices of model fit, the proportion of variance explained by the endogenous constructs, and the number of significant structural path coefficients in the hypothesized direction (Hulland et al., 1996; MacCallum & Austin, 2000). The model fit statistics for the structural model indicated that the initial model was a good fit. Moreover, the proportion of variance for most constructs also supported a well fitting model. Thirty-four of fifty-seven hypotheses were supported. One hypothesis (H_{2b2-8} Aesthetics-Form $\rightarrow$ Bank Reaction) which was posited as positive was found to be negative.

The paths leading to and from the “Attitude of Resistance to Discontinuing the Paper Bill” accounted for 15 of the 22 non-supported hypotheses. Also, as discussed previously in section 5.3.1.3, the “Attitude of Resistance to Discontinuing the Paper Bill” had low nomological validity. Overall, the “Attitude of Resistance to Discontinuing the Paper” contributed little to the model. Considerable controversy has existed over the years in the consumer behaviour and marketing literature regarding the attitude type that is most relevant in predicting behaviour. The discussion has centred on whether the “Attitude Toward the Object” (Fazio et al. (1989), or the “Attitude Toward the Behaviour” (Fishbein & Ajzen 1975, 1991), or both should be included in model simultaneously (Eagly & Chaiken, 1993; Lutz 1985; Mittal 1990). In this study the “Attitude Toward the Behaviour” had low nomological validity, low variance explained by its independent constructs, and paths leading to or from this construct almost always

were not significant. As a result, a decision was made to remove this construct from the model and to re-run the model.

5.3.2.5 Assessment of the Revised Structural Model without the “Attitude Toward the Behaviour”

A revised model with the “Attitude of Resistance to Discontinuing the Paper Bill” removed was run with 15 endogenous latent constructs and one exogenous latent construct (Figure 5.2). Seven paths (“Authenticity,” “Aesthetics-Form,” “Aesthetics-Function,” “Redundancy,” “Warranty,” “Permanency,” “Facilitates Work Processes”) that were drawn to the “Attitude of Resistance to Discontinuing the Paper Bill” in the original model were redrawn to “Intention to Resist Discontinuing the Paper Bill.” Theory does not support a direct relationship between “Habit” and “Intention to Resist Discontinuing the Paper Bill” (Aarts et al., 1998), and no path was drawn.

Figure 5.2 – Revised Model (Attitude of Resistance to Discontinuing the Paper Bill Removed)

$\chi^2(df)=6272.70$ (1491), $\chi^2/df=4.2$, RMSEA=0.061, RMSEA Confidence Interval=0.060-0.063, SRMR=0.085, CFI=0.99, NFI=0.98, NNFI=0.98

The removal of the “Attitude of Resistance to Discontinuing the Behaviour” had little impact on the model fit statistics (Table 5.22).

Table 5.22 - Comparison of Analysis Outcomes for the Original and Revised Models

Goodness of Fit Statistics	Original Model	Revised Model (Attitude of Resistance Removed)
Chi-square (df)	7017.02 (1722)	6272.70 (1491)
Normed Chi-square/df	4.0	4.20
RMSEA	0.059	0.061
RMSEA 90% Confidence Interval	0.058, 0.060	0.060, 0.063
SRMR	0.088	0.085
CFI	0.99	0.99
NFI	0.98	0.98
NNFI	0.99	0.99
Paths		
Total Number of Paths	57	48
Percentage of Significant and Positive Paths	59.6%	62.5%
Percentage of Significant but Negative Paths	1.8%	4.2%

Table 5.23a presents the variance explained for those independent and dependent constructs whose paths were changed due to the removal of “Attitude of Resistance to Discontinuing the Paper Bill.” The change in variance explained for “Intention” is significant (from 0.27 in the original model to 0.39 in the revised model) while the change in variance explained for “Behaviour” is not substantial (0.59 to 0.60).

Table 5.23a – Variance of the Dependent Constructs Accounted for by the Independent Constructs for Paths Changed by the Removed of the Attitude of Resistance to Discontinuing the Paper Bill

Independent Constructs	Dependent Construct	R² for Original Model	R² for Revised Model
Original Model Habit, Intention To Resist Discontinuing the Paper Bill, Attitude of Resistance to Discontinuing the Paper Bill Revised Model Habit, Intention To Resist Discontinuing the Paper Bill	Behaviour of Resistance to Discontinuing the Paper Bill	0.59	0.60
Original Model Attitude of Resistance to Discontinuing the Paper Bill, Bank Reaction, Insecure, Irresponsible, Aversion to Dependence, Financial Risk Tolerance, Financial Risk Tolerance Revised Model Bank Reaction, Insecure, Irresponsible, Aversion to Dependence, Financial Risk Tolerance, Financial Risk Tolerance, Redundancy, Permanence, Warranty, Facilities Financial Work Processes, Authenticity, Aesthetics-Form, Aesthetics-Function	Intention to Resist Discontinuing the Paper Bill	0.27	0.39
Original Model Redundancy, Permanence, Warranty, Facilities Financial Work Processes, Authenticity, Aesthetics-Form, Aesthetics-Function, Habit Revised Model With the deletion of the dependent construct, all paths were redrawn to intention except for the path from Habit	Attitude of Resistance to Discontinuing the Paper Bill	0.00	Deleted

There was no change in the variance explained among those constructs whose paths were not altered by the removal of the “Attitude of Resistance to Discontinuing the Paper Bill” (Table 5.23b).

Table 5.23b – Variance of the Dependent Constructs Accounted for by the Independent Constructs for Paths Not Changed by the Removal of the Attitude of Resistance to Discontinuing the Paper Bill

Independent Constructs	Dependent Construct	R ² for Original Model	R ² for Revised Model
Habit	Authenticity	0.60	0.60
Habit	Aesthetics-Form	0.03	0.03
Habit	Aesthetics-Function	0.43	0.43
Authenticity, Aesthetics-Form, Aesthetics-Function	Redundancy	0.62	0.62
Authenticity, Aesthetics-Form, Aesthetics-Function	Warranty	0.55	0.55
Authenticity, Aesthetics-Form, Aesthetics-Function	Permanence	0.61	0.61
Authenticity, Aesthetics-Form, Aesthetics-Function	Facilities Financial Work Processes	0.60	0.60
Authenticity, Aesthetics-Form, Aesthetics-Function	Bank Reaction	0.53	0.53
Authenticity, Aesthetics-Form, Aesthetics-Function	Insecure	0.41	0.41
Authenticity, Aesthetics-Form, Aesthetics-Function	Irresponsible	0.27	0.27
Authenticity, Aesthetics-Form, Aesthetics-Function	Aversion To Dependence	0.53	0.53
Authenticity, Aesthetics-Form, Aesthetics-Function	Financial Risk Tolerance	0.02	0.02
Authenticity, Aesthetics-Form, Aesthetics-Function	Technical Risk Tolerance	0.16	0.16

The path coefficients and t-values of the revised model are presented in Tables 5.23-5.26. The deletion of the “Attitude of Resistance to Discontinuing the Paper Bill”

results in nine less paths than were in the original model and reduces the total number of paths to 48. All paths leading from the “Habit” and “Authenticity” in the revised model were significant and positive (Tables 5.24 and 5.25a). The paths were unchanged in sign and significance from the original model.

Table 5.24 - Path Coefficients and Significance of the Habit Set of Hypotheses of the Revised Model

H₁ - Habit Set		Path Coefficient	T-Value
H _{1a1}	Habit→ Authenticity	0.77*	19.92
H _{1a2}	Habit→Aesthetics-Form	0.18*	4.64
H _{1a3}	Habit→Aesthetics-Function	0.65*	11.15
H _{1c}	Habit→Behaviour of resistance to discontinuing the paper bill	0.63*	11.93

*Significant

Table 5.25a - Path Coefficients and Significance of the Attitude-Object (Authenticity) Set of Hypotheses for the Revised Model

H₂ - Attitude-Object (Authenticity) Set		Path Coefficient	T-Value
H _{2a1-4}	Authenticity→Redundancy	0.78*	26.95
H _{2a1-5}	Authenticity→Warranty	0.36*	11.98
H _{2a1-6}	Authenticity→Permanence	0.68*	19.78
H _{2a1-7}	Authenticity→Facilitates financial work processes	0.76*	22.17
H _{2b1-8}	Authenticity→Bank Reaction	0.38*	12.79
H _{2b1-9}	Authenticity→Insecure	0.25*	7.75
H _{2b1-10}	Authenticity→Irresponsible	0.08*	2.27
H _{2b1-11}	Authenticity→Aversion to Dependence	0.38*	13.13
H _{2c1-10}	Authenticity→Financial risk tolerance	0.17*	3.88
H _{2c1-11}	Authenticity→Technical risk tolerance	0.09*	2.08

*Significant

Nine of the ten paths from “Aesthetic-Function” of the revised model were significant and positive (Table 5.25b). The paths were unchanged in sign and significance from the original model.

Table 5.25b - Path Coefficients and Significance of the Attitude-Object (Aesthetics-Function) Set of Hypotheses for the Revised Model

H₂ - Attitude-Object (Aesthetics-Function) Set		Path Coefficient	T-Value
H _{2a3-4}	Aesthetics-Function → Redundancy	0.27*	9.77
H _{2a3-5}	Aesthetics-Function → Warranty	0.72*	12.64
H _{2a3-6}	Aesthetics-Function → Permanence	0.37*	10.19
H _{2a3-7}	Aesthetics-Function → Facilitates financial work processes	0.26*	9.48
H _{2b3-8}	Aesthetics-Function → Bank Reaction	0.67*	12.86
H _{2b3-9}	Aesthetics-Function → Insecure	0.67*	12.51
H _{2b3-10}	Aesthetics-Function → Irresponsible	0.66*	11.97
H _{2b3-11}	Aesthetics-Function → Aversion to Dependence	0.65*	13.00
H _{2c3-12}	Aesthetics-Function → Financial risk tolerance	-0.01	-0.24
H _{2c3-13}	Aesthetics-Function → Technical risk tolerance	0.50*	9.07

*Significant

Three of the ten paths from “Aesthetics-Form” of the revised model were significant and positive (Table 5.25c). The paths were unchanged in sign and significance from the original model. As in the original model the path from “Aesthetics-Form” to “Bank Reaction” was negative and, although significant, was quite low in value.

Table 5.25c - Path Coefficients and Significance of the Attitude-Object (Aesthetics-Form) Set of Hypotheses for the Revised Model

H₂ - Attitude-Object (Aesthetics-Form) Set		Path Coefficient	T-Value
H _{2a2-4}	Aesthetics-Form→Redundancy	0.03	1.59
H _{2a2-5}	Aesthetics-Form→Warranty	-0.03	-1.52
H _{2a2-6}	Aesthetics-Form→Permanence	0.04	1.70
H _{2a2-7}	Aesthetics-Form→Facilitates financial work processes	0.07*	3.92
H _{2b2-8}	Aesthetics-Form→Bank Reaction	-0.05*	-2.22
H _{2b2-9}	Aesthetics-Form→Insecure	0.04	1.65
H _{2b2-10}	Aesthetics-Form→Irresponsible	0.16*	5.33
H _{2b2-11}	Aesthetics-Form→Aversion to Dependence	0.0	0.07
H _{2c2-12}	Aesthetics-Form→Financial risk tolerance	0.09*	2.23
H _{2c2-13}	Aesthetics-Form→Technical risk tolerance	0.05	1.46

*Significant

Table 5.26 presents the coefficients and significance of the Outcome set of hypotheses in the revised model. One of six paths leading to the “Intention to Resist Discontinuing the Paper Bill” was significant and positive. Three of the seven path coefficients of the paths from the original model became insignificant in the revised model:

- Bank reaction→Intention to resist discontinuing the paper bill
- Aversion to Dependence→Intention to resist discontinuing the paper bill
- Financial risk tolerance→ Intention to resist discontinuing the paper bill.

Table 5.26 - Path Coefficients and Significance of the Outcome (Normative and Self-Identity) Set of Hypotheses for the Revised Model

H₃ - Outcome (Normative and Self-Identity) Set		Path Coefficient	T-Value
H _{3c8}	Bank reaction → Intention to resist discontinuing the paper bill	0.03	0.24
H _{3c9}	Insecure → Intention to resist discontinuing the paper bill	0.13*	2.20
H _{3c10}	Irresponsible → Intention to resist discontinuing the paper bill	0.06	1.30
H _{3c11}	Aversion to Dependence → Intention to resist discontinuing the paper bill	0.11	1.22
H _{3c12}	Financial risk tolerance → Intention to resist discontinuing the paper bill	0.0	-0.09
H _{3e13}	Technical risk tolerance → Intention to resist discontinuing the paper bill	-0.02	-0.66

*Significant

Table 5.27 presents the coefficients and significance of the Intention-Behaviour hypothesis in the revised model. The path from “Intention to Resist Discontinuing the Paper Bill” was significant and positive.

Table 5.27 - Path Coefficients and Significance of the Intention-Behaviour Hypothesis for the Revised Model

H₅ – Intention-Behaviour		Path Coefficient	T-Value
H ₅	Intention to not discontinue the paper bill → Behaviour of resistance to discontinuing the paper bill	0.22*	4.53

*Significant

Table 5.28 presents the coefficients and significance of the new paths in the revised model. Of the seven new paths only three were significant and two were positive:

- Authenticity→Intention to resist discontinuing the paper bill (negative)
- Redundancy→Intention to resist discontinuing the paper bill (positive)
- Facilitates Financial Work Processes→Intention to resist discontinuing the paper bill (positive).

Table 5.28 - Path Coefficients and Significance of the New Set of Hypotheses for the Revised Model

H₆ - New Set		Path Coefficient	T-Value
H _{6a1}	Authenticity→ Intention to resist discontinuing the paper bill	-0.63*	-2.35
H _{6a2}	Aesthetics-Form→ Intention to resist discontinuing the paper bill	0.05	1.43
H _{6a3}	Aesthetics-Function→ Intention to resist discontinuing the paper bill	-0.66	-1.87
H _{6b5}	Redundancy→ Intention to resist discontinuing the paper bill	0.53*	4.01
H _{6b6}	Warranty→ Intention to resist discontinuing the paper bill	0.26	1.54
H _{6b7}	Permanence→ Intention to resist discontinuing the paper bill	0.08	0.72
H _{6b8}	Facilitates Financial Work Processes→ Intention to resist discontinuing the paper bill	0.86*	8.94

*Significant

In summary, the revised model was posited as a recursive model with 15 endogenous latent constructs and one exogenous latent construct. The model fit statistics for the structural model indicated that the revised model was a good fit. Moreover, the proportion of variance for most constructs also supported a well fitting model. Of the 48

hypotheses that remained in the revised model after the removal of the “Attitude of Resistance to Discontinuing the Paper Bill,” 62.5% were supported. In the original model 59.6% of the hypotheses were supported.

As was the case for the original model, one hypothesis (H_{2b2-8} Aesthetics-Form→Bank Reaction) was found to be negative. Three of the hypotheses (H_{3c8} , H_{3c11} , H_{3c12}) in the original model were unsupported in the revised model. The paths from “Bank Reaction,” from “Aversion to Dependence,” and from “Financial Risk Tolerance” to “Intention” were not significant in the revised model, while the paths were significant in the original model.

Of the seven new paths, two paths were supported (Redundancy→ Intention to resist discontinuing the paper bill and Facilitates Financial Work Processes→ Intention to resist discontinuing the paper bill) and one was significant and negative (Authenticity→ Intention).

The “Attitude of Resistance to Discontinuing the Paper Bill” construct was found to contribute very little to the original model and the construct was removed to create the revised model. The revised model was analyzed. The model fit statistics indicated that the revised model was a good fit to the data. The proportion of variance explained for 14 of the 16 constructs also supported a well-fitting model with 62.5 % of the hypotheses supported. Therefore, the revised model was accepted as the best-fit model and is more parsimonious than the original model. The next section continues the structural model analysis by discussing the testing of three rival models against the revised model.

5.3.2.5 *Assessment of the Rival Models*

As part of model evaluation, in addition to the revised model (“Attitude of Resistance to Discontinuing the Paper Bill” removed), three rival models were evaluated to determine if the revised model will stand as the best model. In this study, “Habit” played an important role in the model directly influencing the behaviour and the attitude object constructs, and indirectly influencing the outcome constructs through the attitude object. Two of the rival models were based on removing the direct effect of “Habit” (“Habit” → “Authenticity,” “Aesthetics-Form,” “Aesthetics-Function,” “Behaviour of Resistance to Discontinuing the Paper Bill”), and the third rival model was based on removing the direct and indirect effects of “Habit” by completely removing the construct from the model. The figures, the significance of the structural path coefficients and the proportion of variance accounted for by the dependent constructs of the three rival models are presented in Appendix O.

Researchers have been debating the inclusion of “Habit” in attitude-behaviour frameworks for many years. Researchers tend to agree that “Habit,” which reflects past behaviour, tends to correlate well with future behaviour (Ajzen, 2001). However, researchers do not agree on whether it is necessary to include the construct of “Habit” in attitude-behaviour frameworks. Ajzen (1991) commented that the main benefit of including “Habit” was to test the sufficiency of the model because “Habit”/past behaviour provides a control for some of the omitted constructs.

Assuming that the frequent performance of a behavior leads to the formation of a habit and that a habit can influence behavior independent of attitudes and intentions, researchers proposed that frequency of past behavior be added to attitude-behaviour

frameworks (Bentler & Speckart, 1979; Triandis, 1977). Bagozzi et al. (2000) found that the influence of attitudes and subjective norms on intentions and behaviours was reduced after “Habit” was added to TRA. In addition, Bagozzi et al. (2000) found that past behaviour would have greater impact on behaviour than on intentions for eating alone or eating with friends. They concluded that past behaviour summarized the effects of all attitudes and subjective norms for past behaviour, whereas intentions summarized only the attitudes and subjective norms under the conscious control of the respondent.

It has been argued that if behaviour is reasoned, then the “Habit” should only have an indirect link to future behaviour as “Habit” would be mediated by “Intention” (Bamberg et al., 2003). Ouellette & Wood (1998) in their study of travel mode choice found the removal of the path from “Habit” to “Behaviour” increased the variance explained of the “Intention.”

Removing the paths from “Habit” to “Authenticity,” “Aesthetics-Form” and “Aesthetics-Function” would be consistent with the Framework of the Attitude Toward the Object (Fazio, 1986). Fazio (1986) argued that the perception of the object is the cue for the automatic activation of the “Attitude Toward the Object” when there is a strong association between the attitude object and the consumer’s evaluation of the attitude object, as is the case with the paper bill. The appearance of an object may activate attitudes that exert influence on behaviour so quickly that there is no conscious attitude activation (Bargh et al., 1992). Therefore, “Habit” as an automatic, unconscious action would not be required when the “Attitude Toward the Object” was present in the framework, particularly if the attitude was strongly held and the evaluation automatically activated.

While it is generally accepted that many everyday behaviours are controlled in part by intentions and in part by habit (Eagly and Chaiken, 1993), other researchers maintain that habit has no substantive, unique explanatory value (Fishbein and Ajzen, 1980). Therefore, removing the “Habit” construct would have no effect on the model and result in a more parsimonious model.

The fit statistics for the original model, the revised model, and the three rival models are presented in Table 5.29. All three rival models were more parsimonious and were supported by previous research and by attitude-behaviour theory. However, the model fit statistics for the three rival models were not found to be a substantive improvement over the revised model. SRMR levels improved for two of the rival models (rival models 1 and 3). Also, the chi-square was significantly reduced for rival model 1 and 3 over the revised model, but not for rival model 2. However, the number of supported paths declines greatly for the rival models 1 and 3. Therefore, overall none of the rival models is an improvement over the revised model.

**Table 5.29 - Comparison of Analysis Outcomes
for the Original, Revised and Rival Models**

Goodness of Fit Statistics	Original Model	Revised Model	Rival Model 1 Habit-Object Path Removed	Rival Model 2 Habit-Behaviour Path Removed	Rival Model 3 Habit Construct Removed
Chi-square (df)	7017.02 (1722)	6272.70 (1491)	5510.44 (1488)	6423.94 (1492)	4829 (1278)
Normed Chi-Square/df	4.0	4.2	3.7	4.3	3.8
RMSEA	0.059	0.061	0.056	0.062	0.057
RMSEA 90% Confidence Interval	0.058, 0.060	0.060, 0.063	0.055, 0.058	0.061, 0.064	0.055, 0.059
NFI	0.98	0.98	0.98	0.98	0.98
NNFI	0.99	0.99	0.99	0.99	0.99
CFI	0.99	0.99	0.99	0.99	0.99
SRMR	0.088	0.085	0.041	0.089	0.046
Number of Paths	57	48	45	47	44
Number of Significant and Positive Paths	34	30	16	30	15
Percentage of Significant and Positive Paths	59.6%	62.5%	33.3%	61.2%	34%
Percentage of Significant and Negative Paths	1.8%	4.2%	37.7%	4.3%	29.5%

As was predicted by previous research (Bagozzi et al., 2000), the variance explained for the “Behaviour” and “Intention” constructs was impacted by the removal of the paths from “Habit” and the removal of “Habit” completely from the model (Table 5.30). In rival model 2 removing the path from “Habit” to “Behaviour” resulted in a major reduction in the variance explained of “Behaviour” (19%). Removing the path from “Habit” to “Attitude Toward the Object” (“Authenticity,” “Aesthetics-Function,”

“Aesthetics-Form”) had little effect on the variance of “Behaviour” explained (59%).

Removing “Habit” completely from the model reduced the variance of “Behaviour” explained to 30%.

In contrast to the negative impact on “Behaviour” when the effect of “Habit” was reduced or removed, the variance of “Intention” explained was improved in all three rival models. Removing the path from “Habit” to the attitude object (63%) improved the variance of “Intention” explained over the revised model as did removing the path from “Habit” to “Behaviour” (42%). Removing the “Habit” construct from the model also improved the variance of “Intention” explained (65%).

Table 5.30 - Comparison of the Variance Explained of Behaviour and Intention for the Original, Revised and Rival Models

Variance Explained (R^2)	Behaviour	Intention
Original Model	0.59	0.27
Revised Model	0.60	0.39
Rival Model 1 Habit-Attitude Object Path Removed	0.59	0.63
Rival Model 2 Habit-Behaviour Path Removed	0.19	0.42
Rival Model 3 Habit Construct Removed	0.30	0.65

Although rival model 1 had similar fit statistics (Normed Chi-Square, RMSEA, RMSEA 90% Confidence Interval, NFI, NNFI, CFI, SRMR) and variance explained for “Behaviour,” and much higher variance explained for “Intention” than the revised model, it failed on criterion issues of much lower proportion of supported paths and higher proportion of negative paths. Rival models 2 and 3 had similar fit statistics as the revised

model but explained much less of the variance in “Behaviour” than the revised model.

Therefore, after testing three rival models, it was concluded that none was an overall better model in comparison to the revised model when all aspects were considered.

Therefore, the revised model (“Attitude of Resistance to Discontinuing the Paper Bill” removed) was accepted as the final model.

6. DISCUSSION OF RESULTS AND CONCLUSIONS

Chapter 6 discusses the results of model testing in section 6.1, followed by a brief summary and conclusions of the research in section 6.2.

6.1 Discussion of the Results of Model Testing

The purpose of this research was to explore the issue of behaviour of resistance to discontinuing a dominant existing technology in the face of an alternative innovation. This is an important and understudied issue with significant theoretical importance. A model of resistance to discontinuing the existing technology of paper bill presentment in EBPP system was developed and tested on a sample of 850 online bill payers using SEM. The final model had 15 endogenous latent constructs and one exogenous latent construct.

Figure 6.1 shows the final model with the 30 significant paths. The darker arrows designate path coefficients 0.50 or greater. To make the figure visually easier to understand, the paths from “Aesthetics-Form” are shown with long and short dashes to differentiate its paths from “Authenticity” and “Aesthetics-Function.” The hypotheses labels from “Authenticity,” “Aesthetics-Form” and “Aesthetics-Function” are not shown on the model due to space constraints.

Figure 6.1 – Final Model of Resistance to Discontinuing the Paper Bill Showing Significant Paths

$\chi^2(df)=6272.70$ (1491), $\chi^2/df=4.2$, RMSEA=0.061, RMSEA Confidence Interval=0.060-0.063, SRMR=0.085, CFI=0.99, NFI=0.98, NNFI=0.98

The model shown has 30 significant paths. The darker arrows designate path coefficients 0.50 or greater. The paths from “Aesthetics-Form” are shown with long and short dashes to differentiate its paths from “Authenticity” and “Aesthetics-Function.” The hypothesises labels from “Authenticity,” “Aesthetics-Form” and “Aesthetics-Function” are not shown on the model due to space constraints.

All paths leading from the “Habit” in the revised model were supported. In the model, “Habit” has a direct influence on “Behaviour” and an indirect influence on “Intention” through the attitude-object construct. “Habit” and “Intention to Resist Discontinuing the Paper Bill” directly explained 60% of the variance of the “Behaviour of Resistance to Discontinuing the Paper Bill.” “Habit” had a stronger direct effect on “Behaviour” (path coefficient of 0.63) than “Intention” (path coefficient of 0.22). Bagozzi et al. (2000) also found that when “Habit” was included in an attitude-behaviour framework, the effect of “Intention” on “Behaviour” was weaker than that of “Habit” on “Behaviour.”

The path coefficients from “Habit” to two of the three attitude-object constructs (“Authenticity,” “Aesthetics-Function”) were high (0.77 and 0.65 respectively). The influence of “Habit” on “Aesthetics-Form” was weaker than on the other two attitude-object constructs (path coefficient 0.18) but still significant. Not only does “Habit” directly influence the attitude object constructs, it has a significant indirect influence on the three constructs (“Redundancy,” Facilitates Financial Work Process,” “Insecure”) leading to “Intention” in the final model as well as on “Intention” (Table 5.31).

Table 5.31 – Indirect Effects of Habit

	Coefficient	T-Value
Habit→ Redundancy	1.09*	22.09
Habit → Facilitates Financial Work Processes	0.93*	19.18
Habit→ Insecure	0.92*	19.14
Habit→ Intention	0.91*	17.37

*Significant

These findings suggest the importance of direct and indirect influence of “Habit” in understanding resistance to discontinuing paper bills. Moreover, while the direct influence of “Habit” has been explored in other research, this study illuminated the relationship of past behaviour on attitudes, and indirectly on intentions.

“Habit” was measured in this research as the frequency and automaticity of receiving paper bills. However, habits may also be formed by an emotional or unplanned experience (Verville, 1988), such as a situation where the consumer has to resolve a problem with a bank or organization. In a study on bill payment, half of the respondents had experienced a billing error in the past year which required them to take some action (Doney, 1989). While the past experience of problem resolution in EBPP was not measured in this research, “Habit” may also encompass for consumers of being required by banks and organizations to have the paper bill as evidentiary support for the consumers’ claims in previous problem resolution experiences

This research conceptualized the paper bill as a multi-dimensional artefact. The direct and indirect influence of the attitude-object construct in the model provides a comprehensive understanding of the meaning of the paper bill to consumers and suggests the importance of the paper bill. Twenty-two of the thirty hypothesized direct relationships between the constructs representing the aesthetics and symbolic dimensions of the paper bill (“Authenticity,” “Aesthetics-Form” and “Aesthetics-Function”) and eleven other constructs (“Habit,” “Redundancy,” “Warranty,” “Permanence,” “Facilitates Financial Work Processes,” “Bank Reaction,” “Insecure,” “Irresponsible,” “Aversion to Dependence,” “Financial Risk Tolerance,” “Technical Risk Tolerance”) were supported.

All hypothesized paths leading from “Authenticity” were supported. “Authenticity” reflects the belief that the paper bill provides proof that the document is genuine and that it can provide evidentiary support when required. “Authenticity” exerts the most influence on three constructs (“Redundancy,” “Facilitates Financial Work Process,” “Permanence”). Of the other seven hypothesized paths, “Authenticity” exerts a strong influence on four (“Warranty,” “Bank Reaction,” “Insecure,” “Aversion to Dependence,”) and a relatively weak but significant influence on three constructs (“Financial Risk Tolerance,” “Technical Risk Tolerance,” “Irresponsible”).

Nine of the ten hypothesized paths leading from “Aesthetics-Function” were supported. Items for “Aesthetics-Function” suggest the way in which the bill acts as a roadmap or guidebook for consumers’ actions when using the paper bill. “Aesthetics-Function” exerts the most influence on six constructs (“Warranty,” “Bank Reaction,” “Insecure,” “Irresponsible,” “Aversion to Dependence,” “Technical Risk Tolerance”). “Aesthetics-Function” exerts a strong influence on the three other constructs (“Permanence,” “Redundancy,” “Facilitates Financial Work Process”).

“Aesthetics-Form” describes the characteristics of the paper bill that identifies it as a document that was produced and sent by a bank or billing organization, and makes it distinct from other non-financial paper documents. Three of the ten paths leading from “Aesthetics-Form” were supported, and the path coefficients were small compared to those leading from “Authenticity” and “Aesthetics-Function” to the same constructs (“Irresponsible,” “Facilitates Financial Work Process,” “Financial Risk Tolerance”). The paper bill was hypothesized to have an important role in the consumers’ financial management process as well as having influence in the situation of problem resolution,

and this expectation was borne out in the final revised model. Respondents' comments in the pre-test reflected their need to have control over the various stages of the bill payment process. The wording of the final questionnaire also reflected the consumers' need for control. The respondents' highest level of agreement was accorded to those items on the questionnaire that explicitly or implicitly suggested the ways in which the paper bill provides control to the respondent over their financial information.

The direct influence of the attitude-object on the "Intention to Resist Discontinuing the Paper Bill" was unsupported. However, the indirect influence of the three constructs ("Authenticity," "Aesthetics-Function," "Aesthetics-Form") of the attitude-object on "Intention" was supported (Table 5.32). These findings suggest the importance of conceptualizing the paper bill as a multi-dimensional artefact in order to understand its direct and indirect influence in the resistance to discontinuing paper bills in the context of EBPP.

Table 5.32 – Indirect Effects of Authenticity, Aesthetics-Function and Aesthetics-Form on Intention

	Coefficient	T-Value
Authenticity → Intention	1.30*	4.41
Aesthetics-Function → Intention	0.79*	2.40
Aesthetics-Form → Intention	0.08*	2.84

*Significant

Three constructs ("Facilitates Financial Work Processes," "Redundancy," "Insecure") had a direct influence on "Intention." "Facilitates Financial Work Processes" had the strongest effect on "Intention" with a path coefficient of 0.86. "Redundancy" also

had strong effect on “Intention” with a path coefficient of 0.53. “Insecure” had the weakest influence on “Intention” (path coefficient 0.13).

Consistent with the discussion of the consumer characteristics’ of ‘Innovativeness’ and ‘Resistance to Change’ in the literature review, neither of the hypothesized paths from “Technical Risk Tolerance” and “Financial Risk Tolerance” to “Intention” was supported in the final revised model. Particularly among this most innovative group of respondents, an explanation of the resistance to discontinuing the paper bill was not found in the characteristics of the consumer but rather in understanding the role and meaning of the paper bill in the consumer’s financial management process.

6.2 Summary and Conclusions

Consumers fully adopt electronic bill payment and presentment (EBPP) when they agree to allow a bill to be delivered and paid over the internet only. In fully adopting EBPP consumers discontinue receiving the paper bill or printing the electronic bill on paper. Consumers who have adopted online banking and bill payment have been described as innovative consumers (Sarel & Marmorstein, 2003). However, most of these innovative consumers have not extended their innovativeness to the electronic presentment aspects of online banking. The apparently irrational and inconsistent behaviour of adopting online bill payment without adopting electronic bill presentment and/or, among some consumers, of adopting electronic bill presentment without suppressing paper bills suggests that the behaviour involving resistance to giving up an existing technology may be a behaviour that develops from different beliefs and evaluations than the behaviour of resistance to adopting an innovation that has been

studied among non-innovators. The purpose of this research was to explore the issue of behaviour of resistance to discontinuing an existing dominant technology in the face of an alternative innovation.

Resistance to discontinuing the use of an existing dominant technology was distinguished from non-adoption, resistance to adoption and *status quo* behaviour when: (1) consumers are aware of and have the means to access the innovation that could replace the technology, (2) they have already demonstrated an analogous adoption behaviour, (3) the technology maintains the utilitarian functions it always had and develops new utilitarian functions that it did not have before the innovation was introduced, and (4) where the percentage of ‘innovation only’ adoption in the target population remains small over many years.

This research investigated the behaviour of resistance to discontinuing an existing technology and the associated influencing factors. Receiving the paper bill was used as the example of the resistance behaviour. The respondents were innovative consumers (selected based on paying at least one bill online in the past year). The Resistance to Discontinuing the Paper Bill Framework was introduced and tested. The constructs relevant in EPBB were delineated and operationalized.

The literature review discussed the paper bill and bank account statement as a multi-dimensional artefact having meaning to the consumer beyond simply the information contained in it because of the functions these dimensions support. Seven constructs (“Authenticity,” “Aesthetics-Form,” “Aesthetics-Function,” “Facilitates Financial Work Processes,” “Permanence,” “Redundancy,” “Warranty”) were introduced to evaluate these dimensions. The theories used to explain innovation adoption and

resistance with a particular focus on their application in consumer banking were reviewed. No framework or theory was found to explain the behaviour of resisting discontinuing an existing technology. However, innovation adoption and resistance research using attitude-behaviour frameworks suggested important constructs for the final framework. Rationale for the selection of the Composite Attitude-Behaviour Framework (Eagly & Chaiken, 1993) as the base of a Resistance to Discontinuing the Paper Bill Framework was provided. The exogenous and endogenous constructs of the proposed framework were discussed.

The methodological approach used in this research was two-stage. The initial questionnaire was developed on the base of previous research. The final questionnaire was revised based on a pre-test before the data were collected from 1054 respondents who were screened for having paid at least one bill online in the past year. A conservative approach was taken to data cleaning with the result that 850 respondents comprised the final sample for analysis using Structural Equation Modeling techniques.

The criticality of control over the respondents' access to and availability of financial information when it was required emerged during the discussion of the mock-up of the credit card statement and was included in several items overtly or implicitly. Moreover, as a result of the pre-test, the wording of many items was modified, one construct ("Opinion of Family and Friends") was deleted, three constructs ("Insecure," "Irresponsible," "Aversion to Dependence") were added and one construct "Aesthetics" became two constructs ("Aesthetics-Form," "Aesthetics-Function"). A total of 17 endogeneous and exogeneous constructs results and were tested in the Resistance to Discontinuing the Paper Bill Framework ("Habit," "Authenticity," "Aesthetics-Form,"

“Aesthetics-Function,” “Redundancy,” “Warranty,” “Permanence,” “Facilitates Financial Work Processes,” “Bank Reaction,” “Insecure,” “Irresponsible,” “Aversion to Dependence,” “Financial Risk Tolerance,” “Technical Risk Tolerance,” “Attitude of Resistance to Discontinuing the Paper,” “Intention to Resist Discontinuing the Paper Bill,” “Behaviour of Resistance to Discontinuing the Paper Bill”). The final questionnaire contained 90 items (plus six demographic questions).

The descriptive analysis revealed that receiving bills was a regular occurrence for these respondents, and one with which they had much experience. All respondents received paper bills each month while two-thirds of the respondents also received electronic bills. Respondents in this research paid their bills using a variety of banking methods. Almost all respondents used online bill payment. These respondents were not overly concerned about conducting financial transactions online, although they were cognizant of the need to be vigilant for errors in financial transactions. The profile of the respondents in this research (behaviour of paying bills online, technical and financial risk tolerance and demographic profile) is consistent with that of consumers who would be considered by most researchers to be innovative and therefore should be less likely to be resistant to discontinuing the paper bill.

The conceptualization of the paper bill as a multi-dimensional artefact proved to be well-founded. “Authenticity” was found to be relevant for consumers’ management of their financial obligations and for their effective control of these obligations. Consumers made judgments about the authenticity of the financial information provided by the organization on the paper bill as a representation of their actual financial obligation. The items for “Aesthetics-Function” construct suggested the importance of the paper as a

roadmap or guidebook for respondents' actions when managing their household finances. While "Aesthetics-Form" may be less relevant to the management of household finances, "Aesthetics-Form" describes the characteristics of the paper bill that identifies it as distinct from other paper documents and was found in the SEM analysis to support the utilitarian, normative and self-identity outcomes of the framework.

The paper bill plays a role not only during the bill payment transaction but at all stages of the bill payment process. The paper bill acts as a reminder to pay the bill, is used during the bill payment transaction as a place to record the confirmation number, and then is stored under the control of the respondent in manner that would allow the bill to be retrieved at some future time, should it be required. The strength of the respondents' agreement to a several items around the implications of having or not having the paper bill was higher when problem resolution situations with an organization or bank were taken into account. While the paper bill appeared to be relevant and necessary in routine financial management process, it appeared to assume a much larger role in the situation of problem resolution, possibly due to the respondents' need to maintain control of their financial information and to maintain their feeling of confidence when they have to deal with banks and organizations in a problem resolution situation.

In evaluating electronic bill payment and presentment, consumers appear to have concluded that EBPP not only creates new problems, it takes away the solutions to existing problems. Regardless that the bill is received by consumers at approximately the same time each month, consumers want a tangible reminder to pay the bill. The paper bill acts as a cue for action in a way that e-mail does not. In contrast to electronic presentment, the paper bill is an easier way than the electronic bill to retrieve the

information required for bill payment. Not only do consumers believe that there is a risk of their computers or internet failing, but also banks and billing organizations remind them about this by requiring them to record the confirmation number of the transaction outside of the electronic system where the transaction takes place or to print the record of payment.

In addition, the authentication function of paper facilitated by its artefact form has not been transformed to the electronic form of EPBB systems. Banks and billing organizations may bear some of the fault due to the lack of provision for this function within electronic systems. EBPP systems initially provided no option for printing but encouraged consumers through an on-screen message to record the confirmation number of the transaction in a separate location from the electronic system. Today, consumers are allowed, and even encouraged by most EBPP systems to print a paper copy of their bill payment transaction. Consumers perceive from past problem resolution situations with banks and organizations that the responsibility for proving that an error has occurred falls to consumers. Consumers believe that banks and organizations expect them to produce paper documentation as proof of their claims. Consumers conclude that only paper forms of records serve authentication functions, even in the context of EBPP systems.

Therefore, the authentication function of paper is enhanced and consumers resist giving up paper because banks and organizations signal that it is still a necessary form. If banks and organizations want consumers to act otherwise, they will have to act so as to be consistent with this end and design systems which make the paper form and format unnecessary. At this point in time, EPBB systems have enhanced the value of paper format for consumers.

This study makes four major theoretical contributions. This study conceptualises the paper bill as an artefact in order to broaden the dimensions of its evaluation. Specific aesthetic, symbolic and utilitarian dimensions of the paper bill were identified and tested. The paper bill was found to be a multi-dimensional artefact whose role for consumers will not easily be replaced by electronic billing information based on how electronic billing payment and presentment systems are managed by consumers, banks and billing organizations. The paper bill was not found in this study to just provide information to the consumer at the moment of bill payment. Rather it provided information and control over the information to the consumer throughout their financial management process beginning with as a reminder that an action is required of the respondent and ending in being able to retrieve the billing information should further action, particularly related to problem resolution, be required of the consumer. One could argue that electronic bill payment and presentment systems do not represent an improvement for consumers over the existing technology (the paper bill) but fall short in meeting the financial management needs of consumers.

The conceptualization of the paper bill as an artefact highlights the distinction between the form and function of the paper bill. Form, in this study of the paper bill, does not follow function but form is related to the EBPP context. Function derives from form in use in context. Changing context can give new function or enhance existing functions of form. The introduction of EBPP systems changed context and introduced new requirements for back-up and accessibility that had been unnecessary or adequately addressed in a paper-based system. In a paper-based system, except in the case of fire or flood, back-up was unnecessary. The permanency of the paper-based form made back-up

redundancy unnecessary. However, the frequent failure characteristic of electronic systems makes the redundancy function of paper, a new functional requirement. The non-ubiquitous nature of electronic system access (at this point in time) enhances the accessible characteristic of paper-based systems. These two functions, which are characteristics embodied in the form of paper are the consequences of the context of electronic systems.

This study suggested a new perspective for exploring innovation adoption. The literature focuses on the consumers' reaction to an innovation, whereas this study focuses on the existing technology. Other studies have suggested that when potential adopters perceive the threat to their existing situation or resources (Hirschheim & Newman, 1988), their resistance to change heightens. In the situation of EBPP, consumers appear to react to the potential loss of control over the information in a situation where they perceive they are most vulnerable. In order to regain some control over the documentation, if consumers accept paper suppression in electronic bill payment and presentment, they must use their own resources to print the information and accept the risk that the information not produced directly on paper by the organization will not be accepted or, at a minimum, will be challenged. Rather than identifying consumers' intransigence in the face of a replacement innovation as non-adoption, resistance to innovation adoption or *status quo* behaviour, the behaviour was identified and tested in this study as resistance to discontinuing an existing dominant technology.

Not only is an alternative perspective of consumers' resistance proposed, but also the Model of Resistance to Discontinuing the Paper Bill was developed and tested. The final revised model contains 15 endogenous latent constructs and one exogenous latent

construct. The results indicated that the final model was a good fitting model with 63% of the hypotheses supported. The final Model of Resistance to Discontinuing the Paper Bill provides a much better understanding of consumers' attitudes and behaviour with the paper bill in the context of EBPP than has been provided in other research.

7. BENEFITS AND LIMITATIONS OF THE RESEARCH

This chapter briefly highlights the benefits and limitations of this research and offers recommendations for further research.

7.1 Benefits of the Research

This dissertation provides benefits to three groups. This section of the chapter discusses the benefits of this research in three sections in the following order: academics, practitioners, and government.

7.1.1 Academics

The purpose of this research was to explore the theoretical issue of behaviour of resistance to discontinuing an existing dominant technology in the face of an alternative innovation.

As previously stated, this research introduces the concept of resistance to discontinuing an existing technology and suggests a new perspective for exploring innovation adoption in order to improve the explanation of consumers' resistance to abandoning paper-based technology. The Model of Resistance to Discontinuing the Paper Bill was developed and tested in this dissertation. The final revised model was a good fitting model with sound measures of the relevant constructs.

Innovation adoption research has largely ignored any link between the medium used, the content, the context in which it is used, and consumer's resistance to discontinuing an existing dominant technology. This research contributes to the study of paper documents by providing an alternative conceptualization for the paper bill. By seeing the content and medium of the paper bill as distinct from one and other, and

conceptualizing the paper bill as an artefact, its multiple dimensions can be explored.

This study takes a unique perspective on the study of electronic presentment and differentiates between the information contained in the paper bill and the paper on which the information is presented. Conceptualising the paper bill as an artefact in order to broaden the dimensions of its evaluation was well-founded. The attitude-object in the model turned out to an important and significant construct. It is also the first time that a large empirical study of the paper bill has been undertaken.

The paper bill represents a major form of customer contact in regulated industries. Consumer contact in the retail and banking industries via credit card and account statements is on a regular and frequent basis. This research suggests that billing documents and other forms of financial and non-financial documentation between consumers and organizations are a worthy subject of research and can lead to new insights into consumer behaviour. Paper bills can be used to support the customer relationship management process in the same way as product repair and warranties. These latter two have received more attention in the marketing research literature and have been linked to brand re-purchase (Shocker & Srinivasan, 1979), customer satisfaction (Owen, 2006), and are part of service recovery strategies (Parasuraman, 2006).

Business academicians can be encouraged to conduct research that takes the perspective of the consumer rather than focussing only on the needs of the organization. Consumers' attitudes toward innovations should be viewed in light of their views of the existing technology that they are asked to give up, as was shown in this research. Taking the perspective of the consumer has the potential to create new understanding among

academicians and practitioners about consumers' attitudes and behaviours. Rogers (2003) wrote at length about the pro-innovation bias among most academicians and practitioners. He urged researchers, in particular, to consider not only the relative advantages and compatibility of the innovation over existing technology but the consequences of using the innovation to the potential user. This research supports the value of Rogers' argument.

In thinking about the results of this research, it should be considered that what other researchers have been considered partial adoption may have, in fact, been resistance to discontinuing. Given that most consumers, have at an initial resistance to change, exploring their resistance as appropriate and logical has the potential to improve the situation between the technology developers and adopters at any point on the innovation adoption curve, or even non-adopters. The key issues in resistance should be discussed in a less confrontation manner. The Model of Resistance to Discontinuing the Paper Bill assumes a positive attitude toward resistance to discontinuing an existing technology and that the associated reasons can be understood to have a logical and sound basis.

The rate of adoption of the innovation by members of a social system depends on the innovation being seen as having significant relative advantage over the existing technology and to a lesser extent as having compatibility with the members' needs. Electronic presentment has advantages over the paper bill but like all innovations has its disadvantages. This research has highlighted that electronic presentment does not have for most consumers, sufficient relative advantage over the paper bill for electronic presentment to be adopted fully. This research also draws attention to endemic problems in the consumer-organization interaction system around problem resolution. EPBB

appears to exacerbate the situation for the consumer by introducing additional risks in long term management and control of their financial information.

7.1.2 Practitioners

Banks and other billing organizations may have assumed that with the introduction of electronic bill payment and presentment systems, the paper bill would be discarded by consumers at the same pace as the consumers adopted electronic bill payment (Andreeff et al., 2001). The paper bill proved to be remarkably resilient against the electronic bill.

This study suggests that the paper bill appears to be a central representation of control for the consumer during the entire bill payment process. Control emerged during the pre-test discussion of the mock-up of the credit card statement and through the respondents' strong agreement to items that included wording that suggested explicit or implicit control over their financial information. The role of the paper bill was found to be relevant not only during the bill payment transaction but also at all stages during the consumers' financial management process. Each of the items measuring the four constructs ("Permanence," "Warranty," "Facilitates Financial Work Processes," "Redundancy") designated a potential function that paper bill may play in the consumers' financial management process. The process begins with the arrival of the paper bill acting as a reminder that a bill payment is due, to a place to record the confirmation number when paying a bill online, the use of the bill as proof of payment for reimbursement of expenses for business or tax purpose through to archiving and retrieval of the bill should further action, particularly related to problem resolution, be required of the consumer. The paper bill appears to act as a mechanism through which consumers control their financial information.

Prior to the introduction of EBPP paper bills and statements had utility for consumers as a way to acquire the information for bill payment, to manage their finances, and to use in situations of problem resolution. As a result of the consumers' use of EBPP, paper bills and statements have acquired additional value to the consumer (e.g. as a back-up system to EPBB and as a way to avoid having to depend on the organization for information). Consumers want to continue receiving paper bills while using online bill payment because, in using EBPP systems, consumers may believe that they have less control over their financial information than they do when the information is received on paper. Consumers may believe that banks and billing organizations have more control in EBPP because they hold the consumers' information in their systems. Consumers can obtain this information, after a certain period of time, if they pay for its retrieval, if they remain a customer of the bank or organization, or if they receive and keep the paper bill and/or print a copy of the electronic bill. By understanding the meaning of the paper bill for consumers, banks and organizations may find less utility in encouraging consumers to stop receiving the paper bill and statement and find more utility in conceiving of a way to integrate all the functions of the paper bill that are important to the consumer into EPBB systems.

The finding of this study suggests that the way consumers perceive the value of paper documents may be shifting. Some of the responsibility for the possible change in value in the consumers' mind may be the result of actions by banks and organizations. When banks and billing organizations started to charge for receiving a paper bill and offering an electronic bill for free (Bayout, 2002), a value in the form of direct financial cost to the consumer became attached to the paper bill. Moreover, the same billing

organizations that have attempted to interest consumers in suppressing the paper bill have instituted, in order to manage the cost of fraudulent returns, product return policies requiring that the 'original' paper receipt be submitted to the organization in order to return the product and receive a refund for the full price of the product. Without the paper bill, many organizations attach conditions to returning the product which disadvantage the consumer (no return at all, exchange only or a reduced amount refunded to the consumer) (King et al., 2008). Therefore, consumers want paper bills because they are distrustful of the intentions of organizations, having observed the behaviour of billing organizations in the context of returns, and when resolving a problem that requires the assistance of the organization.

Organizations that interact with customers using paper documents, including bills and statements, may be retaining or eliminating paper in their interactions with consumers without understanding the impact of doing so. The findings of this research are consistent with other research demonstrating the importance of paper documents in building and maintaining relationships. Preda (2002) found that financial, reports and analyses and newsletters create networks of social relationships based on knowledge ensuring the continuity of financial activities. McNeish (2006) demonstrated that financial institutions which send more billing and advertising mail tend to develop stronger relationships with their customers than those who do not. The costs of using electronic presentment are downloaded to consumers by the banks and organizations. In fully adopting EPBB, consumers have a choice to print the electronic bill, bearing the costs of paper and ink, and/or find an alternative way of accessing the electronic document when required in the future. The availability of the electronic bill depends on

whether or not consumers have access to the online information (e.g. if an account is closed accessing the information is no longer possible for the consumer and often even for the organization). One result of bearing these additional costs or having to make more effort to think about whether they may have to retrieve the document at some point in the future is that consumers may be developing a new appreciation of paper documents produced and sent by banks and organizations. Moreover, consumers may be interpreting the downloaded costs of paper and ink and the additional effort required as a lack of interest of the banks and billing organizations in the consumers' best interests. Paper bills may act as symbols of the quality of the relationship between organizations and consumers. The provision of paper documents may also play a role in trust building or if suppressed without the consent of consumers, building distrust.

The findings of this study reveal evidence that consumers are using the paper bill as a way to assure their ability to deal with banks and organizations in the situation of problem resolution. Research indicates that for adoption of online banking or any other online financial transaction, trust in the organization is important (Goodman 2005). It could be argued that for financial transactions, greater power is held by the bank due to the dependence of consumers on the services that it provides and the fact that banks possess more information, expertise and financial resources. There are many occasions where banks and other organizations change services, take away services, and add or increase fees with no recourse for consumers. Even exiting the relationship, which involves major disruptions for the consumer or may be essentially impossible if the number of services used is large, may not provide consumers with relief if there is little variance in industry practices.

Liu and Stork (2000) commented that paper documents remain a popular document medium because of their credibility, tangibility, and ease of use. They predicted a long-term coexistence of paper and electronic documents. This study supports Liu and Stork (2000) and provides empirical evidence of the critical functions of credibility, tangibility, and ease of use of the paper bill for the consumer when using electronic bill payment and presentment systems and the centrality of these functions in resistance to relinquishing the paper technology. The validity of the billing information and the company are extracted by the consumer by an assessment of the look and feel of the paper document and a determination of its consistency with the consumers' expectation of paper bills, in general. Consumers use the paper bill in the same way as they use product related attributes (Cox 1967; Olson 1972), i.e., to understand a product and brand. The paper bill represents a composite of information about the organization that sent it. Therefore, the visual display of billing information on a computer screen, as is the case for electronic presentment, may be insufficient for consumers.

Results of this research suggest that consumers' bill payment and presentment behaviours may be formed based on the unplanned experiences of having problems with their bills along with positive and negative experiences with the banks' or organizations' ability to recover and satisfy them in the event of problems. Consumers are limited in their ability to control the transaction quality, and an error can have potentially serious consequences. Consumers appear to believe that banks and organizations would not refrain from opportunistic behaviour if consumers did not have a way to monitor their actions. Therefore, banks and organizations' continued insistence that consumers discontinue receiving the paper bill while insisting on paper documentation in a problem

resolution situation may be sending mixed messages to consumers. These mixed messages may be increasing distrust of banks and organizations among their customers.

Banks and organizations tend to consider consumers' habitual behaviours as being difficult to overcome and not directly affected by marketing activities. Banks and organizations have tried both positive and negative financial incentives with limited success (Bruene, 2002, 2006, 2008). This study is consistent with research that has found that when habit strength toward an existing technology is strong, consumers are less likely to be willing to adopt a new innovation (Ram, 1987).

Verplanken and Wood (2006) proposed and tested two points in which interventions can be made in order to break consumer habits which they called upstream and downstream-plus. Upstream interventions occur before the habit behaviour takes place by disrupting environmental cues and establishing new ones. Downstream-plus provide informational inputs when change is occurring in consumers' lives (e.g. moving households, changing jobs). Banks and organizations would be advised to use both approaches in breaking the paper bill habit.

One example of an upstream intervention would be to interfere with the automatic and frequent way in which paper bills are sent to consumers. Alternating the frequency of bill payment, and therefore the requirement to send the paper bill, from monthly to every second month may have the power to disturb the strength of habit for paper bills in EBPP. Banks and organizations would have to absorb the impact of reduced cash flow. However, the short-term financial loss in order to disrupt the consumer's habit of monthly bill receipt may be offset by a greater proportion of consumers moving toward

'electronic only' bill presentment. The savings from 'electronic only' bill presentment for banks and organizations has been well documented (Furst et al., 2002).

A second upstream intervention to habitual behaviour by banks and organizations could take place in the way these organizations handle problem resolution situations with their customers. Habit in EBPP may encompass not only the past experience of receiving paper bills regularly but also the past experience of problem resolution and other experiences with banks and organizations. If banks and organizations wish to make more progress toward the paperless bill, they should consider modifying their own actions so consumers will no longer consider it necessary to produce the paper bill in a problem resolution situation.

A third upstream intervention could be to change the quality of paper used in creating the paper bill. By reducing the quality of the paper (weight, size and colour of paper) from what is required for high-speed printing of paper bills by the bank and billing organizations to a quality that is similar to that used by consumers in their home, the information provided to consumers through their haptic sense when they touch the paper bill will be changed. As a result, consumers may begin to consider the paper bill printed by them at home and the paper bill received from banks and organizations as equivalent in terms of the information provided by the paper format.

One example of a downstream intervention was the promotion by the Royal Bank to customers, new to the Royal Bank. New customers who opened an online banking account at a Royal Bank branch were given a net book on which to conduct their online banking (Royal Bank, 2009). Opening a new bank account may come about as a result of a household move or job change. While the Royal Bank's primary purpose may be to

increase their customer base, it may have the additional effect of changing the consumers' banking behaviour in other ways. Given the strong habit associated with the paper bill, it is likely that several forms and stages of intervention will be required to affect this construct.

Rather than intervening in the habit of receiving paper bills, banks and organizations may want to consider how to use the value that consumers perceive in paper bills to their advantage. Whether or not the envelope is opened (and most consumers do open an envelope that they perceive contains a bill), the envelope and bill is kept by almost all consumers. The paper envelope represents an additional medium of communication over and above the paper bill or statement contained in the envelope. In the case of billers, using the outside of the envelope as a way to communicate key messages to consumers about changes in service or policy may help to mitigate some of the distrust of consumers toward the actions of banks and other organizations. One small benefit to consumers would be the addition of information in the window of the envelope indicating the payment date. Not only would this give the consumer information to help manage the immediate payment transaction, but for those consumers who file but do not open the envelope, they would be able to find more easily by date the relevant bill or statement should it be required in a situation of problem resolution.

7.1.3 Government

Government at all levels, federal, provincial and municipal, have limited contact with citizens. This research suggests that paper documents have the ability to enhance the relationship between citizens and government. Utilities which are managed and /or heavily regulated by government (such as water, sewage, gas, electricity) have little

contact with their customers except when the service is disrupted. This research suggests that paper bills from utilities have important roles in the consumers' financial management process and in maintaining good customer relationships.

If creating a tangible relationship with citizens is important to governments, the interaction between citizens and governments could be enhanced by the provision of certain important information on paper, as well as delivered through the internet or traditional broadcast media. Governments are responsible for making sure its citizens are prepared for natural disasters and other emergencies. Paper has a vital role in a crisis as it continues to function, requires no power, and the information is not distorted or usually made unreadable over time by changes in electronic systems as is the case for other electronic formats. Governments should ensure that vital information continues to be available on paper and not just in electronic form not only for those Canadians who do not have a computer or access to the internet but also even for those Canadians who, based on their behaviour, have been characterised as internet savvy.

In addition to providing services, government has a role in protecting citizens from organizations who take advantage of them by charging for paper bills or other forms of paper as a way to suppress their use. Governments can be encouraged by this research to prohibit the suppression of paper bills for essential services and information that would be critical to the understanding or use of a service or product.

7.2 Limitations of the Research

Although the findings are encouraging and useful, there are limitations in all research projects. This section of the chapter highlights the four main limitations of this research.

This is first study of the Model of Resistance to Discontinuing an Existing Technology research using the paper bill as the example. While it would appear that many of the important constructs were identified and tested in the model, others may have been left out that could further improve the predictive power of the model (e.g. behavioural control). The addition of other constructs may create a less parsimonious model without improving its explanatory power. Therefore, care must be taken to ensure that additional constructs are theoretically relevant, meaningful to consumers, and add real value to the model.

The “Behaviour of Resistance to Discontinuing the Paper Bill” construct had only two measurement items. One of the two items was relatively weaker in its contribution to CRC and AVE that is typically advised by statisticians. However, the model fit and variance of this construct explained was very good. Therefore, while the search for new measures should continue, it may be difficult to conceive of and create additional measures given the thought and pre-testing already given to finding them in this study.

An online panel was selected as the data collection method because an online panel achieves a representative sample of sufficient size at a reasonable cost. However, the use of online panels has been questioned due to external validity and coverage error (Chakrapani, 2007). Smith & Brown (2005) found that the data collected from online panellists was comparable in quality with data collected from non-panellists. Using an online panel was particularly suited to this study because the respondents had to have paid at least one bill online in the past year to qualify for the study. Therefore, using respondents from an online panel for this study was appropriate.

Respondents 18 to 24 years of age were excluded from the sample and further analysis because they received fewer paper and electronic bills on average, than those 25 years of age and older. Longitudinal research conducted from 1987 to 2004 (Pitney Bowes, 2006) showed that the quantity of mail and bills increases appreciably around 25 years of age. It is not yet clear whether that pattern will continue. Further research should include a larger sample of consumers 24 years of age and younger or evaluate them in a separate study in order to understand their behaviour with paper and electronic bills. In addition, longitudinal tracking would provide additional insight as to whether, as the group aged 24 years of age and younger increases their financial commitments and bill payment activity, their behaviour will grow to resemble that of consumers 25 years of age and older.

7.3 Suggestions for Future Research

While providing new perspectives on resistance to discontinuing an existing technology, developing and testing a Model of Resistance to Discontinuing the Paper Bill as well as delineating and operationalizing the constructs of the model, this study raises questions that require future research.

As the first study of the Model of Resistance to Discontinuing an Existing Technology using the paper bill as an example, further research with the model is necessary to verify the generalizability of the findings. To avoid using self-reported measures of the behaviour of resistance to discontinuing the paper bill, the study could be repeated with customer databases of banks, billing organizations and credit card issuing organizations. Customer databases contain information on the customers' choice for receiving their bill, credit card statement or bank account statement on paper,

electronically or both. The advantage to having an objective source of this information versus having the respondent self-report is that asking respondents to record how many paper or electronic bills that they receive may increase the focus of the respondent on the particular behaviour of receiving paper bills and may cause them to adjust their attitudes to account for the behaviour. In addition, being able to identify, in advance of conducting the survey, those respondents who receive no paper bills or no electronic bills would allow for greater tailoring of the questions asked.

The adoption rate of electronic bill presentment was studied in this research as an aggregate number that included banks, billing organizations and credit card issuing organizations. Adoption rates of bill presentment may vary among customers of the three groups of organizations (banks, billing organizations and credit card issuing organizations) and among the brands within each group. Additional research soliciting more detailed information from the respondents either by group of organizations or brand has the potential to yield additional insights about resistance to discontinuing paper bills.

With some modifications to the constructs, this study may be extendable to other paper document types (magazines, catalogues, magazines and paper books) in order to investigate the consumers' resistance to discontinuing these paper document types. Moreover, in a broader sense the research may be applied to enhance the understanding of the resistance to discontinuing the use of existing media in the face of new media. For example, the Model of Resistance to Discontinuing an Existing Technology may have applications and explanatory power in the study of the apparent resistance to discontinuing television in the face of the internet. The constructs in the model would need to be adapted to suit the particular situation. Ajzen and Fishbein (1991) encourage a

process that ensures that the measures are developed in the specific context of the behaviour as part of the research study being conducted.

“Habit” was measured in this research as the frequency and automaticity of receiving paper bills. However, “Habit” may in part be based on the past experience of problem resolution. Collecting data on the number of times and magnitude of the problem that consumers have encountered a problem in the past year would increase the understanding of the role of paper bills in the situation of problem resolution.

Several new constructs were introduced by this research (“Warranty,” “Redundancy,” “Behaviour of Resistance to Discontinuing the Paper Bill”). Additional research would be useful to determine whether these constructs provide good explanations only in context of the topic of this research or whether the constructs can be applied to improve understanding of resistance to discontinuing behaviours in other situations.

While the construct of “Aversion to Dependence” had no significant impact on intention to resist discontinuing the paper bill in this study, additional research to investigate this construct further is warranted. “Aversion to Dependence” seems to arise out of interpretations by consumers put on the actions of organizations and banks. Consumers appear to believe that banks and billing organizations may not have access to the consumers’ financial information when it is in electronic form and/or may be unwilling to provide the information to the consumer in a problem resolution situation. Consumers’ uncertainty in their own or the banks and billing organizations’ ability to access electronic information may contribute to consumers’ resistance to discontinuing paper bills. The lack of trust reinforced by habitual behaviours may also be a major

source of resistance. Therefore, additional research that examines the antecedents of trust and distrust in electronic bill presentment would appear to be warranted.

The model was tested with innovative respondents (based on their online financial transactions) and who have, on average, higher education and income characteristics than the population of Canadians who use the internet but who do not pay bills online or Canadians who do not use the internet at all. The respondents in this study may represent a population whose overall confidence in handling themselves with bank employees in the situation of problem resolution and whose ability to deal with technical and financial risks is higher than other Canadians. The research should be extended to online consumers who do not currently pay bills online. Research among online consumers who do not currently pay bills online would involve exploring both why they resist discontinuing the bill payment method they currently use and then whether or not they would resist discontinuing the paper bill. Both forms of resistance to discontinuing behaviours would provide additional validation of the model tested in this research.

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Appendix A

Proposed Measures and Items

Construct	Item	Scale	Reference
Behavior of resistance to discontinuing the paper bill	Proportion of paper bills to total bills received	Record actual number	New
	Total number of paper bills received in the past month		
	Total number of bill received online that were printed out in the past month		
Attitude of Resistance to discontinuing the paper bill	Proportion of paper bills to total bills received	7 point scale A bad idea ... a good idea Worthless... Worthwhile Unnecessary... Necessary Useless... Useful Foolish ... wise	Modified from Bansal et al., 2005
	For you, continuing to receive paper bills is		

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Intention to not discontinue the paper bill	You will continue to receive paper bills and statements	Likely-unlikely (7 point)	Modified from Bansal et al., 2005
	You will continue to print out bills and statements that you receive online	Likely-unlikely (7 point)	Modified from Bansal et al., 2005
	You will continue to print out the paper receipt at the Automated Banking Machine when you pay a bill	Likely-unlikely (7 point)	new
	You will continue to print out the paper receipt at the Automated Banking Machine when you make a deposit	Likely-unlikely (7 point)	new
	You will continue to print out the paper receipt at the Automated Banking Machine when you take out money	Likely-unlikely (7 point)	new
	If your bank were to stop sending you a paper statement, you would print one out at the branch or Automated Banking Machine	Likely-unlikely (7 point)	Royal Mail, 2005
	You would pay a fee rather than stop receiving a paper bill or statement from a company	Likely-unlikely (7 point)	Royal Mail, 2005

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Authenticity 1	Paper bills are ...	Inauthentic Authentic Not real Real Not original Original (7 point)	Beverland, 2005; Grayson & Martinec, 2004
Authenticity 2	I believe that paper bills and statements are indisputable evidence of my routine financial transactions I believe that paper bills and statements are the best evidence of my routine financial transactions I consider paper bills and statements to be the legitimate proof of my routine financial transactions For many services, paper bills and statements are the only tangible link I have with the company or bank The quality of the paper used by the company in printing the bill allows me to know that the bill is from a legitimate company	Agree – disagree (7 point)	Ideas for items from Australian Post, 2006; Groves, 2001; Peterson, 2005; Royal Mail, 2003; Trilling, 1971, 1972

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Aesthetics	<p>Please evaluate the following characteristics of paper bills and statements in terms of the management of your household finances.</p> <p>OR</p> <p>Please evaluate the following characteristics of paper bills and statements in terms of the management of your household finances.</p> <p>Contains detailed transaction information</p> <p>Printed double-sided</p> <p>Weight of the paper that the company uses</p> <p>The bill or statement is printed in colour</p> <p>The size of the paper that the company uses</p> <p>Font size used in printing the text</p> <p>The way the information is laid out</p> <p>The company logo that is on it</p> <p>The feel of the paper that the company uses</p> <p>That the information is on paper</p> <p>That the bill or statement comes in the mail</p>	Important to unimportant (7 point)	Ideas for items from Sellen & Harper, 2003; Ganier & Barcenila, 2007; Wallace & Yates-Mercer, 1980

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Redundancy	<p>It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I can't access my computer or the internet</p> <p>It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I delete the electronic notification or don't notice it in my inbox</p> <p>I prefer receiving both the electronic and the paper bill or statement</p> <p>When I pay a bill online, I compare the amount on the paper bill to the amount shown online before paying it</p>	Agree – disagree (7 point)	New
Warranty	<p>I feel more comfortable receiving a paper bill from a company who I don't know well</p> <p>I feel more comfortable receiving a paper bill from company with whom I deal with infrequently</p> <p>When companies make mistakes, I need the paper bill as proof that the transaction occurred incorrectly</p> <p>When banks make mistakes, I need the paper bill as proof that the transaction occurred incorrectly</p>	Agree – disagree (7 point)	New
Permanence	<p>Paper bills and statements are a better way to receive information because they can't be changed or altered without detection by me</p> <p>Paper bills and statements can be accessed and read at a future time regardless of changes in computer software or hardware</p> <p>Unlike electronic bills and statements, I make the decision how long I keep paper bills and statements for future reference</p>	Agree- disagree (7 point)	Ideas for items based on Savic, 1995

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Facilitates Financial Work Processes	<p>I use the paper bill as a reminder to pay the bill</p> <p>I prefer paper bills and statements because I don't have to be at my computer and on the internet to look at them</p> <p>I find it quicker and easier to scan paper bills and statements to find the information I need</p> <p>I can compare month over month paper bills and statements without much effort</p> <p>When I pay bills online, it is best to use the paper bill to record the confirmation number from the screen</p> <p>Paper bills and statements are an important part of the way I manage my household finances</p> <p>I believe that the paper bill or statement is the best way to keep accurate financial records</p> <p>The paper bill is important to me as proof to a business or the Canadian Revenue Agency in order to claim business expenses or tax deductions</p> <p>I would rather remember more passwords to access electronic bills rather than receive paper bills</p> <p>The more banking methods (e.g. ABM, branch, online, telephone) I use, the more I prefer to receive paper bills and statements</p>	Agree – disagree (7 point)	Ideas for items based on Australia Post, 2006; Granier & Barcenilla, 2007; Harper & Sellen, 1995; Hiltunen et al., 2005; Kuisma, 2007; Royal Mail 2005

Appendix A (Continued)
Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Opinion of Family and Friends	<p>Most people who are important to me would approve of my continuing to receive paper bills and statements</p> <p>I worry that if other people knew that I still prefer to receive paper bills and statements, they would think that I don't care about conserving trees</p> <p>I worry that if other people knew that I still prefer to receive paper bills and statements, they would think that I don't care about the environment</p> <p>The paper bill or statement allows other people in my household to look at the information to ensure that I am managing the household finances responsibly</p>	Agree-disagree (7 point)	Liao et al., 1999; Shih & Fang, 2005; Tan & Teo, 2000

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Opinion of Banks and Companies	My bank's belief in my credibility when I have a problem depends on my having the paper bill	Agree – disagree (7 point)	Curran et al., 2003; Hilgert & Hogarth, 2003; Hirschheim & Newman, 1988; Howcroft et al., 2002; Komito, 1998; Kuisma et al., 2007; N'Guola, 2007; Plouffe et al., 2000; Sarel & Marmorsten, 2003
	My bank's willingness to help me when I have a problem increases if I have the paper bill		
	My bank would think that I were financially irresponsible if I couldn't show them the paper bill		
	My credit card company would think that I were financially irresponsible if I couldn't show them the paper bill		
	My utility company would think that I were financially irresponsible if I couldn't show them the paper bill		
	My bank can be counted on to help if I had problems with my accounts		
	My credit card company can be counted on to help if I have problems with my account statement		
	Utility companies can be counted on to help if I had problems with my billing accounts		
	If I didn't have paper statement when I have a problem with my bank account, the bank staff would make me feel incompetent		
	If I didn't have paper bill when I have a problem with my credit card account, the company's employees would make me feel incompetent		
	If I didn't have paper bill when I have a problem with my utility account, the company's employees would make me feel incompetent		

Appendix A (Continued)
Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Financial Risk Tolerance	Which of the following statements below comes closest to the amount of financial risk that you are willing to take when you save or make investments	<p>Take substantial financial risk expecting to earn substantial returns</p> <p>Take above average financial risks expecting to earn above average returns</p> <p>Take average financial risk expecting average returns</p> <p>Take below average financial risk expecting below average returns</p> <p>Not willing to take any financial risks</p>	Modified from Chang, 1994

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Financial Risk Tolerance	<p>I use my money very carefully</p> <p>I budget my money very well</p> <p>I pay my bills immediately to avoid interest or penalties</p> <p>I know almost to the penny how much money I have in my purse, wallet, or pocket at all times</p> <p>I prefer to use money rather than credit cards</p> <p>I always know how much I have in my savings and/or chequing accounts</p> <p>I believe it is rude to inquire about a person's salary</p> <p>I prefer to save money because I'm never sure when things will collapse and I'll need cash</p> <p>I am proud of my ability to save money</p> <p>I always pay my bills promptly</p> <p>My attitude toward money is very similar to that of my parents</p>	Agree-disagree (7 point)	Troisi & Christopher, 2006

Appendix A (Continued)
Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Technical Risk Tolerance	<p>Thinking about technology in general, would you agree or disagree with the following statements.</p> <p>I do not consider it safe giving out my credit card number over the internet</p> <p>I worry that the information I send over the Internet will be seen by other people</p> <p>I do not feel confident doing business with a company that can only be reached online</p> <p>Any business transaction that I do electronically should be confirmed later with something in writing on paper</p> <p>Whenever information gets automated, it's important to check carefully that the computer is not making mistakes</p> <p>When providing information over the Internet, I can never be sure it really gets to the right place</p>	Agree-disagree (7 point)	6 items used from TRI 'Insecure' Factor Parasuraman, 2000

Appendix A (Continued)

Proposed Measures and Items (Continued)

Construct	Item	Scale	Reference
Habit	<p>I receive paper bills and statements frequently</p> <p>I receive paper bills and statements automatically, without any effort on my part</p> <p>I receive paper bills and statements without having to consciously do anything</p> <p>I have been receiving paper bills and statements for a long time</p>	Agree-disagree (7 point)	Modified from Triandis, 1970

APPENDIX B

a) Recruitment Script for Pre-test

My name is Joanne McNeish. I am a PhD student at Carleton University. I am conducting research on bill payment attitudes of Canadians. Your cooperation is greatly appreciated. This questionnaire should take you about 15-20 minutes to fill out. Then we will discuss the questions and this process could take up to 40 minutes with the full process taking no longer than an hour. I think you will find the process enjoyable and not difficult. However, should you feel uncomfortable answering any question, please do not answer it and put an x through the question. You may withdraw from the process at any time, and your questionnaire will be destroyed. The purpose of this pre-test is to evaluate the wording of the questions before asking them online to other participants. Your survey responses will be viewed only by myself, Joanne McNeish, the researcher, and Professor Louise Heslop, my supervisor. After the final questionnaire has been approved, your questionnaire will be destroyed. Your name will never be associated with the questionnaire responses.

This research has been reviewed by the Carleton University Ethics Board. If you have any concerns or questions about the ethics of this project, you can contact the Chair of the Ethics Review Board.

Would you be willing to spend one hour, completing a survey and then commenting on it?

Yes No

The interview would be conducted in your home at a time convenient to you. Before booking a time for the interview, could I ask you a few questions?

Did you pay at least one bill online in the past year? Yes No

Did you receive at least one paper bill in the past year? Yes No

Do you pay at least three bills each month? Yes No

Do you use at least two banking methods each month (e.g. ABM, bank branch, automatic deduction, telephone, online)? Yes No

b) Pre-test Questionnaire

This survey is about paying bills. When you answer the questions please think about the bills that occur regularly and are received by from companies who provide services such as your telephone (home, mobile, internet, wireless, satellite), cable (television, internet), electricity, hydro, municipal taxes, oil, gas, water, sewage, insurance, personal or other household services, as well as bank account statements and credit card statements.

Section A

1. How many paper bills did you receive in the past month? Paper bills include those delivered by the post office, by courier or dropped off to you by another person or picked up by you

Record number of paper bills: _____

2. How many electronic bills did you receive in the past month? Electronic bills include those received via an e-mail link to company's or financial institution's website; an e-mail with the bill attached; electronic bills or billing information for which you received no prompt and retrieved from a website.

Record number of electronic bills: _____

3. Of the electronic bills you received in the past month, how many did you print out?

Record number of electronic bills printed out: _____

4. How many times do you visit an automated banking machine in the past month?

Record number of visits: _____

5. How many paper receipts did you print on those visits to the automated banking machine in the past month?

Record number of paper receipts printed: _____

Section B

6. Thinking about the paper bills you receive, how likely is it that...	Very Unlikely	Very Likely
I will resist discontinuing receiving paper bills and statements	1 2 3 4 5 6 7	
I will resist discontinuing printing out bills and statements that I receive online	1 2 3 4 5 6 7	
I will resist discontinuing printing out the paper receipt at the Automated Banking Machine when I pay a bill	1 2 3 4 5 6 7	
I will resist discontinuing printing out the paper receipt at the Automated Banking Machine when I make a deposit	1 2 3 4 5 6 7	
I will resist discontinuing printing out the paper receipt at the Automated Banking Machine when I take out money	1 2 3 4 5 6 7	
I would pay a fee rather than stop receiving a paper bill or statement from a company	1 2 3 4 5 6 7	

7. Thinking about the paper bills or statements would you agree or disagree with the following statements.	Strongly Disagree..	Strongly Agree
I receive paper bills frequently	1 2 3 4 5 6 7	
I receive paper bills automatically	1 2 3 4 5 6 7	
I receive paper bills without having to consciously do anything	1 2 3 4 5 6 7	
Paper bills would require effort not to receive	1 2 3 4 5 6 7	
Paper bill belongs to my monthly routine	1 2 3 4 5 6 7	
I would find it hard not to receive paper bills	1 2 3 4 5 6 7	
I have no need to think about receiving paper bills	1 2 3 4 5 6 7	
I have been receiving paper bills for a long time	1 2 3 4 5 6 7	
The more banking methods (e.g. ABM, branch, online, telephone) I use, the more I need to receive paper bills	1 2 3 4 5 6 7	
Paper bills are the genuine representation of my financial obligations	1 2 3 4 5 6 7	
Paper bills are the evidence of my financial obligation	1 2 3 4 5 6 7	
Paper bills are considered to be legitimate proof of what is owed	1 2 3 4 5 6 7	
Paper bills provides valid evidence in the case of a dispute or disagreement with the company or bank	1 2 3 4 5 6 7	
For many services, paper bills are the only tangible link I have with the company with whom I do business	1 2 3 4 5 6 7	
The quality of the paper used by the company in printing the paper bill allows me to know that the bill is from an actual company to whom I owe money	1 2 3 4 5 6 7	

7. (Continued) Thinking about the paper bills or statements would you agree or disagree with the following statements.	Strongly Disagree..Strongly Agree
The paper bill acts as a back up to electronic information in case I can't access my computer or the internet	1 2 3 4 5 6 7
The paper bill acts as a back-up in case I delete the electronic notification or don't notice it in my inbox	1 2 3 4 5 6 7
I prefer receiving both the electronic and the paper bill	1 2 3 4 5 6 7
Paper bills can't be disputed because they can't be changed or altered without detection	1 2 3 4 5 6 7
Paper bills can be accessed and read at a future time regardless of changes in computer software or hardware	1 2 3 4 5 6 7
Paper bills can be accessed and read at a future time regardless of whether I change banks	1 2 3 4 5 6 7
Paper bills are a concrete reminder to pay the bill	1 2 3 4 5 6 7
I don't have to do anything to receive my paper bill	1 2 3 4 5 6 7
I prefer paper bills because I don't have to be at my computer and on the internet to look at my bills	1 2 3 4 5 6 7
I can quickly and easily scan paper bills to find the information I need	1 2 3 4 5 6 7
I can compare two or more paper bills without much effort	1 2 3 4 5 6 7
When I pay bills online, by writing the confirmation number from the screen on the paper bill, I don't have to print out the information	1 2 3 4 5 6 7
Paper bills are an important part of the way I manage my household financial process/accounts	1 2 3 4 5 6 7
Paper bills are the best way to keep accurate records	1 2 3 4 5 6 7

8a. Please evaluate the following characteristics of paper bills on a 7 point scale where 1 is irrelevant and 7 is very relevant.	Irrelevant Relevant
The non-standard paper size that the company uses	1 2 3 4 5 6 7
Contains detailed transaction information,	1 2 3 4 5 6 7
Printed double-sided	1 2 3 4 5 6 7
Weight of the paper that the company uses	1 2 3 4 5 6 7
The bill is printed in colour	1 2 3 4 5 6 7
Font size used in printing the text	1 2 3 4 5 6 7
The way the information is laid out	1 2 3 4 5 6 7
The company logo that is on it	1 2 3 4 5 6 7
The feel of the paper that the company uses	1 2 3 4 5 6 7
That the bills are printed on paper	1 2 3 4 5 6 7
That the bill comes in the mail	1 2 3 4 5 6 7

8b. Please evaluate the following characteristics of paper bills on a 7 point scale where 1 is not unimportant and 7 is important	Unimportant	Important					
The non-standard paper size that the company uses	1	2	3	4	5	6	7
Contains detailed transaction information	1	2	3	4	5	6	7
Printed double-sided	1	2	3	4	5	6	7
Weight of the paper that the company uses	1	2	3	4	5	6	7
The bill is printed in colour	1	2	3	4	5	6	7
Font size used in printing the text	1	2	3	4	5	6	7
The way the information is laid out	1	2	3	4	5	6	7
The company logo that is on it	1	2	3	4	5	6	7
The feel of the paper that the company uses	1	2	3	4	5	6	7
That the bills are printed on paper	1	2	3	4	5	6	7
That the bill comes in the mail	1	2	3	4	5	6	7

9. Would you say that resisting discontinuing receiving paper bills is:
A bad idea..... A good idea -3 -2 -1 0 +1 +2 +3
Useless..... Useful -3 -2 -1 0 +1 +2 +3
Harmful Beneficial -3 -2 -1 0 +1 +2 +3
Foolish..... Wise -3 -2 -1 0 +1 +2 +3

10. Choose one of the following statements that comes closest to the amount of financial risk that you are willing to take when you save, or make investments. Indicate the one answer that applies best to you.

Take substantial financial risk expecting to earn substantial returns	☐
Take above average financial risks expecting to earn above average returns	☐
Take average financial risk expecting average returns	☐
Take below average financial risk expecting below average returns	☐
Not willing to take any financial risks	☐

11. Thinking about technology in general, would you agree or disagree with the following statements.	Strongly Disagree...Strongly Agree
I do not consider it safe giving out my credit card number over a computer	1 2 3 4 5 6 7
I worry that the information I send over the Internet will be seen by other people	1 2 3 4 5 6 7
I do not feel confident doing business with a company that can only be reached online	1 2 3 4 5 6 7
Any business transaction that I do electronically should be confirmed later with something in writing	1 2 3 4 5 6 7
Whenever something gets automated, it's important to check carefully that the computer is not making mistakes	1 2 3 4 5 6 7
When providing information to a machine or over the Internet, I can never be sure it really gets to the right place	1 2 3 4 5 6 7

12. Please evaluate paper bills based on a seven point scale. Would you say that paper bills are:
Inauthentic.....Authentic -3 -2 -1 0 +1 +2 +3
UnrealReal -3 -2 -1 0 +1 +2 +3
Not Original.....Original -3 -2 -1 0 +1 +2 +3

Section C

13. Would you agree or disagree with the following statements?	Strongly Disagree...Strongly Agree
Banks have a history of changing their rates and policies to their advantage	1 2 3 4 5 6 7
Credit card companies have a history of changing their rates and policies to their advantage	1 2 3 4 5 6 7
Utility companies have a history of changing their rates and policies to their advantage	1 2 3 4 5 6 7
I feel more comfortable receiving a paper bill from a company that I don't know well	1 2 3 4 5 6 7
I feel more comfortable receiving a paper bill from company that I deal with infrequently	1 2 3 4 5 6 7
When I have a problem with my account, my bank's belief in my credibility depends on my having the paper bill	1 2 3 4 5 6 7
When I have a problem with my account my bank's willingness to help me increases if I have the paper bill	1 2 3 4 5 6 7
If I couldn't show my bank the paper bill when I have a problem with my account, they would think that I was financially irresponsible	1 2 3 4 5 6 7
If I couldn't show credit card company the paper bill when I have a problem with my account, they would think that I was financially irresponsible	1 2 3 4 5 6 7
If I couldn't show the utility company the paper bill when I have a problem with my billing account, they would think that I was financially irresponsible	1 2 3 4 5 6 7
Banks make mistakes and I will need the paper bill as proof that I paid what I thought I owed	1 2 3 4 5 6 7
The government requires that I have paper bills for tax purposes or the deduction would be disallowed	1 2 3 4 5 6 7
I have to have printed bills as proof to claim as an expense for business purposes or I will not get the money back	1 2 3 4 5 6 7
If I had problems with my accounts, my bank could be counted on to help	1 2 3 4 5 6 7
If I had problems with my account statement, my credit card company could be counted on to help	1 2 3 4 5 6 7
If I had problems with my billing account, utility companies could be counted on to help	1 2 3 4 5 6 7

13. (Continued) Would you agree or disagree with the following statements?	Strongly Disagree...Strongly Agree
Most people who are important to me would approve of my continuing to receive paper bills	1 2 3 4 5 6 7
The paper bill allows other people in my household to look at the information to ensure that I am managing the household finances responsibly	1 2 3 4 5 6 7
If I don't have the paper statement when I have a problem with my bank account, their reaction would make me feel incompetent	1 2 3 4 5 6 7
If I don't have the paper statement when I have a problem with my credit card account, their reaction would make me feel incompetent	1 2 3 4 5 6 7
If I don't have paper bill when I have a problem with my utility account, their reaction would make me feel incompetent	1 2 3 4 5 6 7

APPENDIX C

a) Recruitment Script for Second Pre-test

My name is Joanne McNeish. I am a PhD student at Carleton University. I am conducting research on bill payment attitudes of Canadians. Your cooperation is greatly appreciated. This questionnaire should take you about 5 minutes to fill out. Then we will discuss the questions. The full process will take no longer than 15 minutes. I think you will find the process enjoyable and not difficult. However, should you feel uncomfortable answering any question, please do not answer it and put an x through the question. You may withdraw from the process at any time, and your questionnaire will be destroyed. The purpose of this pre-test is to evaluate the wording of the questions before asking them online to other participants. Your survey responses will be viewed only by myself, the researcher, and Professor Louise Heslop, my supervisor. After the final questionnaire has been approved, your questionnaire will be destroyed. Your name will never be associated with the questionnaire responses. This research has been reviewed by the Carleton University Ethics Board. If you have any concerns or questions about the ethics of this project, you can contact the Chair of the Ethics Review Board.

Would you be willing to spend one hour, completing a survey and then commenting on it?

Yes No

The interview would be conducted in your home at a time convenient to you. Before booking a time for the interview, could I ask you a few questions?

Did you pay at least one bill online in the past year? Yes No

Did you receive at least one paper bill in the past year? Yes No

Do you pay at least three bills each month? Yes No

Do you use at least two banking methods each month (e.g. ABM, bank branch, automatic deduction, telephone, online)? Yes No

6. Thinking about the paper bills and statements you receive, how likely is it that...	Strongly Disagree...Strongly Agree
a) I will resist discontinuing receiving paper bills and statements	1 2 3 4 5 6 7
b) I will resist discontinuing printing out bills and statements that I receive online	1 2 3 4 5 6 7
c) I will resist discontinuing printing out the paper receipt at the Automated Banking Machine when I pay a bill	1 2 3 4 5 6 7
d) I will resist discontinuing printing out the paper receipt at the Automated Banking Machine when I make a deposit	1 2 3 4 5 6 7
e) I will resist discontinuing printing out the paper receipt at the Automated Banking Machine when I take out money	1 2 3 4 5 6 7
f) I would pay a fee rather than stop receiving a paper bill or statement from a company	1 2 3 4 5 6 7
OR	

6. Thinking about the paper bills and statements you receive, how likely is it that...	Strongly Disagree....Strongly Agree
a) I will oppose attempts by companies to stop sending me paper bills and statements	1 2 3 4 5 6 7
b) I will refuse to accept not printing bills and statements that I receive online	1 2 3 4 5 6 7
c) I will refuse to accept not printing the paper receipt at the Automated Banking Machine when I pay a bill	1 2 3 4 5 6 7
d) I will refuse to accept not printing the paper receipt at the Automated Banking Machine when I make a deposit	1 2 3 4 5 6 7
e) I will refuse to accept not printing the paper receipt at the Automated Banking Machine when I take out money	1 2 3 4 5 6 7
f) I would pay a fee rather than stop receiving a paper bill or statement from a company	1 2 3 4 5 6 7
OR	

6. Thinking about the paper bills and statements you receive, how likely is it that...	Strongly Disagree....Strongly Agree
a) I intend to oppose attempts by companies to stop sending me paper bills and statements	1 2 3 4 5 6 7
b) I intend to refuse to accept not printing bills and statements that I receive online	1 2 3 4 5 6 7
c) I intend to refuse to accept not printing the paper receipt at the Automated Banking Machine when I pay a bill	1 2 3 4 5 6 7
d) I intend to refuse to accept not printing the paper receipt at the Automated Banking Machine when I make a deposit	1 2 3 4 5 6 7
e) I intend to refuse to accept not printing the paper receipt at the Automated Banking Machine when I take out money	1 2 3 4 5 6 7
f) I would pay a fee rather than stop receiving a paper bill or statement from a company	1 2 3 4 5 6 7
OR	

6. Thinking about the paper bills and statements you receive, would you agree or disagree with the following statements.	Strongly Disagree....Strongly Agree
a) If I am given the choice, I am not going to stop receiving paper bills	1 2 3 4 5 6 7
b) If I am given the choice, I am not going to stop receiving paper bank account statements	1 2 3 4 5 6 7
c) I am not going to stop printing out bills that I receive online	1 2 3 4 5 6 7
d) I am not going to stop printing out bank account statements that I receive online	1 2 3 4 5 6 7
e) I am not going to stop printing out the paper receipt at the Automated Banking Machine when I pay a bill	1 2 3 4 5 6 7
f) I will continue to print out the paper receipt at the Automated Banking Machine when I make a deposit	1 2 3 4 5 6 7
g) I will continue to print out the paper receipt at the Automated Banking Machine when I take out money	1 2 3 4 5 6 7
i) I would pay a fee rather than stop receiving a paper bill or statement from a company	1 2 3 4 5 6 7

Appendix D

Table 1 – Modification of Wording of Items as a Result of the Pre-test

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Behaviour of not discontinuing the paper bill	Total number of paper bills received in the past month	Total number of paper bills received in the past month
	Total number of bill received online that were printed out in the past month	Total number of bill received online that were printed out in the past month
		Number of paper bills received in the past month from companies that would provide or do provide an electronic bill
	Total number of visits to the ABM in the past month	Total number of visits to the ABM in the past month
	Total number of paper receipts printed at the ABM in the past month	Total number of paper receipts printed at the ABM in the past month
		ITEMS ADDED
		Total number of visits to the ABM in the past month
		Total number of paper receipts printed at the ABM in the past month
		Throw out without opening the envelope
		Keep for future reference without opening the envelope
		Open the envelope and use for some purpose
		ITEMS ADDED
		Total number of credit cards
		Total number of bank accounts

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on National Questionnaire
Intention to not discontinue the paper bill	How likely is it that you will resist discontinuing receiving paper bills	If I am given a choice, I am not going to stop receiving paper bills If I am given a choice, I am not going to stop receiving paper statements
	How likely is it that you will resist discontinuing printing out bills that you received online	I am not going to stop printing out bills that I receive online I am not going to stop printing out bills that I receive online
	How likely it is that you will resist discontinuing printing out the paper receipt at the ABM	THREE ITEMS REPLACED ONE ITEM I am not going to stop printing out the paper receipt at the Automated Banking Machine when I pay a bill I am not going to stop printing out the paper receipt at the Automated Banking Machine when I make a deposit I am not going to stop printing out the paper receipt at the Automated Banking Machine when I take out money
	How likely is it that you would get a print out from the branch or ABM if your bank were to stop sending you a paper statement	If my bank were to stop sending me a paper statement, I would print one out at the branch or Automated Banking Machine
	How likely is it that you would pay a fee rather than stop receiving a paper bill from a company or utility	I would pay a fee rather than stop receiving a paper bill or statement from a company

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Attitude of Resistance to discontinuing the paper bill	Would you say that resisting discontinuing receiving paper bills is	TWO QUESTIONS ASKED. ONE FOR PAPER BILLS AND ONE FOR PAPER BANK ACCOUNT STATEMENTS Would you say that refusing to stop receiving paper bills is
	A bad idea ... a good idea Useless... Useful Harmful... Beneficial Foolish ... Wise Unpleasant... Pleasant Undesirable... Desirable	Would you say that refusing to stop receiving paper bank account statements is A bad idea ... a good idea Worthless... Worthwhile Unnecessary... Necessary Useless... Useful Foolish ... Wise Unpleasant... Pleasant Undesirable... Desirable
Authenticity 1	Paper bills are ...	Paper bills are ...
	Inauthentic ... Authentic	Inauthentic ... Authentic
	Not real ... Real	Not real ... Real
	Not original... Original	Not original... Original

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Authenticity 2	Paper bills are the genuine representation of my financial obligations	ONE ITEM DELETED I believe that paper bills and statements are indisputable evidence of my routine financial transactions
	Paper bills are the evidence of my financial obligation	I believe that paper bills and statements are the best evidence of my routine financial transactions
	Paper bills are considered to be the legitimate proof of what is owed	I consider paper bills and statements to be the legitimate proof of my routine financial transactions
	For many services, paper bills are the only tangible link I have with the company with whom I do business	For many services, paper bills and statements are the only tangible link I have with the company or bank
	The quality of the paper used by the company in printing the bill allows me to know that the bill is from an actual company to whom I owe money	The quality of the paper used by the company in printing the bill allows me to know that the bill is from a legitimate company
	Paper bills provide valid evidence in the case of a dispute or disagreement with the company or bank	Paper bills and statements provide valid evidence in the case of a dispute or disagreement with the company or bank

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Aesthetics	<p>Please evaluate the following characteristics of paper bills on a 7 point scale where 1 is irrelevant and 7 is relevant</p> <p>Please evaluate the following characteristics of paper bills on a 7 point scale where 1 is unimportant and 7 is important</p>	<p>RELEVANCE SCALE PREFERRED BY RESPONDENTS AND WORDING ADDED TO CLARIFY CONTEXT</p> <p>Please evaluate the following characteristics of paper bills on a 7 point scale where 1 is irrelevant and 7 is relevant to the management of your household finances.</p>
	<p>Contains detailed transaction information</p> <p>Printed double-sided</p> <p>Weight of the paper that the company uses</p> <p>The bill is printed in colour</p> <p>Non-standard paper size that the company uses</p> <p>Font size used in printing the text</p> <p>The way the information is laid out</p> <p>The company logo that is on it</p> <p>That the bills are printed on paper</p> <p>The feel of the paper that the company uses</p> <p>That the bill comes in the mail</p>	<p>ONE ITEM DELETED</p> <p>Contains detailed transaction information</p> <p>Printed double-sided</p> <p>Weight of the paper that the company uses</p> <p>The bill or statement is printed in colour</p> <p>The size of the paper that the company uses</p> <p>Font size used in printing the text</p> <p>The way the information is laid out</p> <p>The company logo that is on it</p> <p>The feel of the paper that the company uses</p> <p>That the information is on paper</p> <p>That the bill or statement comes in the mail</p>

Appendix D (Continued)

Table 1 –Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Permanence	<p>Paper bills and statements are a better way to receive information because they can't be changed or altered without detection</p> <p>Paper bills can be accessed and read it at a future time regardless of changes in computer software or hardware</p> <p>Paper bills can be accessed and read it at a future time regardless of whether I change banks</p>	<p>Paper bills and statements are a better way to receive information because they can't be changed or altered without detection</p> <p>Paper bills and statements can be accessed and read at a future time regardless of changes in computer software or hardware</p> <p>Unlike electronic bills and statements, I make the decision how long I keep paper bills and statements for future reference</p>

Appendix D (Continued)

Table 1 –Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Facilitates Financial Work Processes	Paper bills are a concrete reminder to pay the bill	ONE ITEM DELETED
	I don't have to do anything to receive my paper bill	I use the paper bill as a reminder to pay the bill
	I prefer paper bills because I don't have to be at my computer and on the internet to look at my bill	I don't have to do anything to receive my paper bill
	I can quickly and easily scan paper bills to find the information I need	I prefer paper bills and statements because I don't have to be at my computer and on the internet to look at them
	I can compare two or more paper bills without much effort	I find it quicker and easier to scan paper bills and statements to find the information I need
	Paper bills are an important part of the way I manage my household financial process/accounts	I can compare month over month paper bills and statements without much effort
		Paper bills and statements are an important part of the way I manage my household finances

Appendix D (Continued)

Table 1 –Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Facilitates Financial Work Processes (Continued)	Paper bills are the best way to keep accurate records	ONE ITEM DELETED I believe that the paper bill or statement is the best way to keep accurate financial records
	The government requires that I have to have printed bills for tax purposes or the deduction would be disallowed	The government requires that I have to have printed bills for tax purposes or the deduction would be disallowed
	I have to have printed bills as proof to claim as an expense for business purposes or I will not get the money back	I have to have printed bills as proof to claim as an expense for business purposes or I will not get the money back The paper bill is important to me as proof to a business or the Canadian Revenue Agency in order to claim business expenses or tax deductions
		ONE ITEM ADDED The more bank channels I use to pay bills, the more I need to receive the paper bill

Appendix D (Continued)

Table 1 –Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Redundancy	The paper bill acts as a back up to electronic information in case I can't access my computer or the internet	It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I can't access my computer or the internet
	The paper bill acts as a back-up in case I delete the electronic notification or don't notice it in my inbox	It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I delete the electronic notification or don't notice it in my inbox
	I prefer receiving both the electronic and the paper bill	I prefer receiving both the electronic and the paper bill or statement
	When I pay bills online, by writing the confirmation number from the screen on the paper bill, I don't have to print out the information	When I pay bills online, it is best to use the paper bill to record the confirmation number from the screen

Appendix D (Continued)

Table 1 –Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Warranty	<p>I feel more comfortable receiving a paper bill from a company who I don't know well</p> <p>I feel more comfortable receiving a paper bill from company with whom I deal with infrequently</p>	<p>I feel more comfortable receiving a paper bill from a company who I don't know well</p> <p>I feel more comfortable receiving a paper bill from company that I deal with infrequently</p>
	<p>Banks make mistakes and I will need the paper bill as proof that I paid what I thought I owed</p>	<p>TWO ITEMS ADDED TO ASK QUESTION SEPARATELY FOR BANKS, COMPANIES AND CREDIT CARD COMPANIES</p> <p>When banks make mistakes, I need the paper bill as proof that the transaction occurred incorrectly</p> <p>When companies make mistakes, I need the paper bill as proof that the transaction occurred incorrectly</p> <p>When credit card companies make mistakes, I need the paper bill as proof that the transaction occurred incorrectly</p>

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Opinion of Family and Friends	Most people who are important to me would approve of my continuing to receive paper bills The paper bill allows other people in my household to look at the information to ensure that I am managing the household finances responsibly	ITEMS DELETED Most people who are important to me would approve of my continuing to receive paper bills The paper bill allows other people in my household to look at the information to ensure that I am managing the household finances responsibly

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Reaction of Bank	My bank's belief in my credibility when I have a problem depends on my having the paper bill My bank's willingness to help me when I have a problem increases if I have the paper bill	ONE ITEM ADDED When I have a problem with my account that is not my fault, having the paper statement increases my confidence in dealing with the bank When I have a problem with my account that is not my fault, having my paper statement increases the likelihood that the bank will believe me When I have a problem with my account my bank's willingness to help me increases if I have the paper statement
	Irresponsible	THREE ITEMS REQUIRED If I didn't have the paper statement when I have a problem with my account, the bank would think that I was financially irresponsible If I did not have the credit card statement when I have a problem with my account, the credit card company would think that I was financially irresponsible If I did not have the paper bill when I have a problem with my billing account, the utility company would think that I was financially irresponsible

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Insecure	<p>PRE-TEST WILL DETERMINE IF THREE ITEMS ARE NEEDED OR JUST BANK ITEM</p> <p>My bank can be counted on to help if I had problems with my accounts</p> <p>My credit card company can be counted on to help if I have problems with my account statement</p> <p>Utility companies can be counted on to help if I had problems with my billing accounts</p>	<p>THREE ITEMS REQUIRED</p> <p>If I didn't have the paper statement when I had a problem with my bank account, their reaction would make me feel insecure</p> <p>If I didn't have the paper statement when I had a problem with my credit card account, their reaction would make me feel insecure</p> <p>If I didn't have the paper bill when I had a problem with my utility company account, their reaction would make me feel insecure</p>
Aversion to Dependence	<p>PRE-TEST WILL DETERMINE IF THREE ITEMS ARE NEEDED OR JUST BANK ITEM</p> <p>If I didn't have paper statement when I have a problem with my bank account, the bank staff would make me feel incompetent</p> <p>If I didn't have paper bill when I have a problem with my credit card account, the company's employees would make me feel incompetent</p> <p>If I didn't have paper bill when I have a problem with my utility account, the company's employees would make me feel incompetent</p>	<p>THREE ITEMS REQUIRED</p> <p>It concerns me that if I don't keep the paper bill, I would have to depend on the credit card company to provide me with the information</p> <p>It concerns me that if I don't keep the paper bill, I would have to depend on the utility company to provide me with the information</p> <p>It concerns me that if I don't keep the paper statement, I would have to depend on the bank to provide me with the information</p>

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Financial Risk Tolerance	Which of the following statements below comes closest to the amount of financial risk that you are willing to take when you save or make investments	Which of the following statements below comes closest to the amount of financial risk that you are willing to take when you save or make investments
	Take substantial financial risk expecting to earn substantial returns	Take substantial financial risk expecting to earn substantial returns
	Take above average financial risks expecting to earn above average returns	Take above average financial risks expecting to earn above average returns
	Take average financial risk expecting average returns	Take average financial risk expecting average returns
	Take below average financial risk expecting below average returns	Take below average financial risk expecting below average returns
	Not willing to take any financial risks	Not willing to take any financial risks

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Financial Risk Tolerance (Continued)	<p>I use my money very carefully</p> <p>I budget my money very well</p> <p>I pay my bills immediately to avoid interest or penalties</p> <p>I know almost to the penny how much money I have in my purse, wallet, or pocket at all times</p> <p>I prefer to use money rather than credit cards</p> <p>I always know how much I have in my savings and/or chequing accounts</p> <p>I believe it is rude to inquire about a person's salary</p> <p>I prefer to save money because I'm never sure when things will collapse and I'll need cash</p> <p>I am proud of my ability to save money</p> <p>I always pay my bills promptly</p> <p>My attitude toward money is very similar to that of my parents</p>	<p>I use my money very carefully</p> <p>I budget my money very well</p> <p>I pay my bills immediately to avoid interest or penalties</p> <p>I know almost to the penny how much money I have in my purse, wallet, or pocket at all times</p> <p>I prefer to use money rather than credit cards</p> <p>I always know how much I have in my savings and/or chequing accounts</p> <p>I believe it is rude to inquire about a person's salary</p> <p>I prefer to save money because I'm never sure when things will collapse and I'll need cash</p> <p>I am proud of my ability to save money</p> <p>I always pay my bills promptly</p> <p>My attitude toward money is very similar to that of my parents</p>

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Technical Risk Tolerance	Thinking about technology in general, would you agree or disagree with the following statements. I do not consider it safe giving out my credit card number over a computer I worry that the information I send over the Internet will be seen by other people I do not feel confident doing business with a company that can only be reached online	Thinking about technology in general, would you agree or disagree with the following statements. I do not consider it safe giving out my credit card number over the internet I worry that the information I send over the Internet will be seen by other people I do not feel confident doing business with a company that can only be reached online
	Any business transaction that I do electronically should be confirmed later with something in writing on paper sent by the company Whenever something gets automated, it's important to check carefully that the computer is not making mistakes When providing information to a machine or over the Internet, I can never be sure it really gets to the right place	Any business transaction that I do electronically should be confirmed later with something in writing on paper Whenever information gets automated, it's important to check carefully that the computer is not making mistakes When providing information over the Internet, I can never be sure it really gets to the right place

Appendix D (Continued)

Table 1 – Modification of Wording of Items as a Result of the Pre-test (Continued)

Construct	Item on Pre-test Questionnaire	Item on Final Questionnaire
Habit	Paper bills are something that . . .	I receive paper bills and statements frequently
	I receive frequently	I receive paper bills and statements automatically,
	I receive automatically	without any effort on my part
	I receive without having to consciously do anything	I receive paper bills and statements without having to consciously do anything
	I have been receiving paper bills and statements for a long time	I have no need to think about receiving paper bills and statements

APPENDIX D (Continued)

**Table 2 - Modification of the Scale of and Number of Items as a
Result of the Pre-test**

Construct	Measure	Revision to Scale	Final Number of Items with Revision Indicated Below
Behaviour of resistance to discontinuing the paper bill	Proportion of paper and electronic bills to total bills received	None Record actual number	3 items No change
	Proportion of receipts printed to times bills are paid at ABM	None	2 items No change
	Proportion of paper bills received that are/could be printed out	New Item Record actual number	1item added
	Number of Credit Cards	New Item Record actual number	1item added
	Number of Bank Accounts	New Item Record actual number	1item added
	Behaviour with Envelope	New Items Not at all my usual behaviour –Very much my usual behaviour (7 point scale)	3 items added
Intention to resist discontinuing the paper bill	Behavioural Intention	None 7 point Likert type	9 items 5 items added
Attitude of Resistance to discontinuing the paper bill	Resistance Attitude	Final scale A bad idea-A good idea Worthless- Worthwhile Unnecessary- Necessary Useless-Useful Foolish-Wise (7 point scale)	5 items No change

APPENDIX D (Continued)

Table 2 - Modification of the Scale of and Number of Items as a Result of the Pre-test (Continued)

Construct	Measure	Revision to Scale	Final Number of Items with Revision Indicated Below
Attitude Toward the Object	Authenticity (version 1)	None Inauthentic ... Authentic Not real ...Real Not original... Original (7 point scale)	3 items
	Authenticity (version 2)	None 7 point Likert type	5 items 1 item deleted
	Aesthetics (version 1)	Scale deleted Not all important to very important (7 point)	--
	Aesthetics (version 2)	None Irrelevant to relevant (7 point scale)	10 items 1 item deleted
Utilitarian Outcomes	Redundancy	None 7 point Likert type	3 items 1 item deleted
	Warranty	None 7 point Likert type	5 items (2 items added)
	Permanence	None 7 point Likert type	3 items No change
	Facilitates Financial Work Processes	None 7 point Likert type	8 items 2 items deleted

APPENDIX D (Continued)

Table 2 - Modification of the Scale of and Number of Items as a Result of the Pre-test (Continued)

Construct	Measure	Revision to Scale	Final Number of Items with Revision Indicated Below
Normative Outcomes	Opinion of Family and Friends	None 7 point Likert type	2 items deleted
	Bank Reaction	None 7 point Likert type	3 items 1 item added
	Insecurity	None 7 point Likert type	3 items
	Irresponsible	None 7 point Likert type	3 items
	Aversion to Dependence	None 7 point Likert type	3 items
Self Identity	Financial Risk Tolerance	None 1 item with 5 point scale and 11 items with 7 point Likert type	12 items No change
	Technical Risk Tolerance	None 7 point Likert type	6 items No change
Habit	Habit	None 7 point Likert type	4 items No change

APPENDIX E

FINAL QUESTIONNAIRE

PROV

In which province or territory do you live?

British Columbia Alberta Saskatchewan Manitoba Ontario Quebec New Brunswick
Nova Scotia Prince Edward Island Newfoundland and Labrador Nunavut The Northwest
Territories The Yukon

SCREENING QUESTION

Have you paid at least one bill online in the past year? Yes No – end and thank

.....

1. How many paper bills, bank statements and credit card statements did you receive in the past month? (answer of 0 allowed) Paper bills and statements include those delivered by the post office, by courier or dropped off to you by another person or picked up by you. Please include bank account statements and credit card statements as well as the bills that occur regularly for services such as:

- cable (e.g. television, internet)
- telephone (e.g. home, mobile, internet, wireless, satellite)
- electricity, hydro
- taxes (e.g. federal, municipal)
- oil
- gas
- water, sewage
- insurance (e.g. home, car)
- personal or other household services

Please estimate as accurately as possible the number of paper bills and statements received: _____

2. How many electronic bills and statements did you receive in the past month? Electronic bills include those received via an e-mail link to company's or financial institution's website; an e-mail with the bill attached; electronic bills or billing information for which you received no prompt and retrieved from a website. (answer of 0 allowed)

Please estimate as accurately as possible the number of electronic bills received:

SKIP Q3 IF Q2=00

3. Of the electronic bills and statements you received in the past month, how many did you print out? (answer of 0 allowed)

Please estimate as accurately as possible the number of electronic bills and statements printed out: _____

SKIP Q3NEW IF Q1=00

3NEW. Of the paper bills and statements that you received in the past month, how many are from companies that would provide or do provide you with an electronic bill or statement. (answer of 0 allowed)

Please estimate as accurately as possible the number of paper bills and statements that are also available electronically _____

4. How many times did you visit an automated banking machine in the past month? (answer of 0 allowed)

Please estimate as accurately as possible the number of visits _____

SKIP Q5 IF Q4=00

5. On those visits to the automated banking machine in the past month, how many times did you print a paper receipt? (answer of 0 allowed)

6. Thinking about the paper bills and statements you receive, would you agree or disagree with the following statements.	Strongly Disagree....Strongly Agree
a) If I am given the choice, I am <u>not</u> going to stop receiving paper bills	1 2 3 4 5 6 7
b) If I am given the choice, I am <u>not</u> going to stop receiving paper bank account statements	1 2 3 4 5 6 7
c) I am <u>not</u> going to stop printing out bills that I receive online	1 2 3 4 5 6 7
d) I am <u>not</u> going to stop printing out bank account statements that I receive online	1 2 3 4 5 6 7
e) I am <u>not</u> going to stop printing out the paper receipt at the Automated Banking Machine when I pay a bill	1 2 3 4 5 6 7
f) I will continue to print out the paper receipt at the Automated Banking Machine when I make a deposit	1 2 3 4 5 6 7
g) I will continue to print out the paper receipt at the Automated Banking Machine when I take out money	1 2 3 4 5 6 7
h) If my bank were to stop sending me a paper statement, I would print one out at the branch or Automated Banking Machine	1 2 3 4 5 6 7
i) I would pay a fee rather than stop receiving a paper bill or statement from a company	1 2 3 4 5 6 7
j) DUMMY QUESTION	1 2 3 4 5 6 7

7. Thinking about the paper bills or statements would you agree or disagree with the following statements.	Strongly Disagree	Strongly Agree
a) I believe that paper bills and statements are indisputable evidence of my routine financial transactions	1	2 3 4 5 6 7
b) I believe that paper bills and statements are the best evidence of my routine financial transactions	1	2 3 4 5 6 7
c) I consider paper bills and statements to be legitimate proof of my routine financial transactions	1	2 3 4 5 6 7
d) Paper bills and statements provide valid evidence in the case of a dispute or disagreement with the company or bank	1	2 3 4 5 6 7
e) For many services, paper bills and statements are the only tangible link I have with the company or bank with whom I do business	1	2 3 4 5 6 7
f) It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I can't access my computer or the internet	1	2 3 4 5 6 7
g) It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I delete the electronic notification or don't notice it in my inbox	1	2 3 4 5 6 7
h) Paper bills and statements are a better way to receive information because they can't be changed or altered without detection	1	2 3 4 5 6 7
i) Paper bills and statements can be accessed and read at a future time regardless of changes in computer software or hardware	1	2 3 4 5 6 7
j) Unlike electronic bills and statements, I make the decision how long I keep paper bills and statements for future reference	1	2 3 4 5 6 7
k) I receive paper bills and statements frequently	1	2 3 4 5 6 7
l) I receive paper bills and statements automatically without any effort on my part	1	2 3 4 5 6 7
m) I receive paper bills and statements without having to consciously do anything	1	2 3 4 5 6 7
n) Paper bills and statements are an important part of my monthly financial routine	1	2 3 4 5 6 7
o) I would find it difficult not to receive paper bills and statements	1	2 3 4 5 6 7
p) I have been receiving paper bills and statements for a long time	1	2 3 4 5 6 7

7. (Continued) Thinking about the paper bills or statements would you agree or disagree with the following statements.	Strongly Disagree	Strongly Agree
q) The more bank methods (e.g. ABM, branch, online, telephone) I use, the more I prefer to receive paper bills and statements	1	2 3 4 5 6 7
r) I use the paper bill as a reminder to pay my bill	1	2 3 4 5 6 7
s) I prefer paper bills and statements because I don't have to be at my computer and on the internet to look at them	1	2 3 4 5 6 7
t) I find it quicker and easier to scan through paper bills and statements to find the information I need	1	2 3 4 5 6 7
u) I can compare month over month paper bills and statements without much effort	1	2 3 4 5 6 7
v) When I pay bills online, it is best to use the paper bill to record the confirmation number from the screen	1	2 3 4 5 6 7
w) Paper bills and statements are an important part of the way I manage my household finances	1	2 3 4 5 6 7
x) I believe that the paper bill or statement is the best way to keep accurate financial records	1	2 3 4 5 6 7

8. Please evaluate the following characteristics of paper bills on a 7 point scale where 1 is irrelevant and 7 is relevant to the management of your household finances.	Irrelevant...Relevant
a) Contains detailed transaction information	1 2 3 4 5 6 7
b) Weight of the paper that the company uses	1 2 3 4 5 6 7
c) The bill or statement is printed in colour	1 2 3 4 5 6 7
d) The size of the paper that the company uses	1 2 3 4 5 6 7
e) Font size used in printing the text	1 2 3 4 5 6 7
f) The way the information is laid out	1 2 3 4 5 6 7
g) The company logo that is on it	1 2 3 4 5 6 7
h) The feel of the paper that the company uses	1 2 3 4 5 6 7
i) That the information is on paper	1 2 3 4 5 6 7
j) That the bill or statement comes in the mail	1 2 3 4 5 6 7

9. Please indicate your level of agreement with each of the following statements where 1 means strongly disagree and 7 means strongly agree	Strongly Disagree .. Strongly Agree
a) I feel more comfortable receiving a paper bill from a company that I don't know well	1 2 3 4 5 6 7
b) I feel more comfortable receiving a paper bill from company that I deal with infrequently	1 2 3 4 5 6 7
c) When I have a problem with my account that is not my fault, having the paper statement increases my confidence in dealing with the bank	1 2 3 4 5 6 7
d) When I have a problem with my account that is not my fault, having my paper statement increases the likelihood that the bank will believe me	1 2 3 4 5 6 7
e) When I have a problem with my account that is not my fault, my bank's willingness to help me increases if I have the paper statement	1 2 3 4 5 6 7
f) If I didn't have the paper statement when I have a problem with my account, the bank would think that I was financially irresponsible	1 2 3 4 5 6 7
g) If I did not have the credit card statement when I have a problem with my account, the credit card company would think that I was financially irresponsible	1 2 3 4 5 6 7
h) If I did not have the paper bill when I have a problem with my billing account, the utility company would think that I was financially irresponsible	1 2 3 4 5 6 7
i) When companies make mistakes, I need the paper bill as proof that the transaction occurred incorrectly	1 2 3 4 5 6 7
j) When credit card companies make mistakes, I need the paper credit card statement as proof that the transaction occurred incorrectly	1 2 3 4 5 6 7
k) When banks make mistakes, I need the paper statement as proof that the transaction occurred incorrectly	1 2 3 4 5 6 7
l) It concerns me that if I don't keep the paper bill, I would have to depend on the credit card company to provide me with the information	1 2 3 4 5 6 7

9. (Continued) Please indicate your level of agreement with each of the following statements where 1 means strongly disagree and 7 means strongly agree	Strongly Disagree .. Strongly Agree
m) It concerns me that if I don't keep the paper bill, I would have to depend on the utility company to provide me with the information	1 2 3 4 5 6 7
n) It concerns me that if I don't keep the paper statement, I would have to depend on the bank to provide me with the information	1 2 3 4 5 6 7
o) The paper bill is important to me as proof to a business or the Canadian Revenue Agency in order to claim business expenses or tax deductions	1 2 3 4 5 6 7
p) If I didn't have the paper statement when I had a problem with my credit card account, their reaction would make me feel insecure	1 2 3 4 5 6 7
q) If I didn't have the paper bill when I had a problem with my utility company account, their reaction would make me feel insecure	1 2 3 4 5 6 7
r) If I didn't have the paper statement when I had a problem with my bank account, their reaction would make me feel insecure	1 2 3 4 5 6 7
s) If my current bank were to raise the price of my checking account, I would still be a customer of the bank	1 2 3 4 5 6 7
t) I would highly recommend my bank to my friends and family	1 2 3 4 5 6 7

10. Please evaluate paper bills and statements based on a seven point scale. Would you say that paper bills and statements are:
a) Inauthentic.....Authentic 1 2 3 4 5 6 7
b) UnrealReal 1 2 3 4 5 6 7
c) Not Original.....Original 1 2 3 4 5 6 7

11. Please evaluate the internet on a seven point scale. Would you say that the internet is:

a) UnexcitingExciting
1 2 3 4 5 6 7
b) MundaneFascinating
1 2 3 4 5 6 7
c) Uninvolving.....Involving
1 2 3 4 5 6 7
d) Unappealing.....Appealing
1 2 3 4 5 6 7

12. Would you say that refusing to stop receiving paper bills is:

a) A bad idea..... A good idea
1 2 3 4 5 6 7
b) Worthless Worthwhile
1 2 3 4 5 6 7
c) Unnecessary Necessary
1 2 3 4 5 6 7
d) Useless Useful
1 2 3 4 5 6 7
e) Foolish..... Wise
1 2 3 4 5 6 7

13. Would you say that refusing to stop receiving paper bank account statements is:

a) A bad idea..... A good idea
1 2 3 4 5 6 7
b) Worthless Worthwhile
1 2 3 4 5 6 7
c) Unnecessary Necessary
1 2 3 4 5 6 7
d) Useless Useful
1 2 3 4 5 6 7
e) Foolish..... Wise
1 2 3 4 5 6 7

14. Thinking about the way in which you manage money, would you agree or disagree with the following statements.	Strongly Disagree....Agree
a) I use my money very carefully	1 2 3 4 5 6 7
b) I budget my money very well	1 2 3 4 5 6 7
c) I pay my bills immediately to avoid interest or penalties	1 2 3 4 5 6 7
d) I know to the penny how much money I have in my purse, wallet or pocket at all times	1 2 3 4 5 6 7
e) I prefer to use cash or a debit card, rather than credit cards	1 2 3 4 5 6 7
f) I always know how much I have in my savings and /or chequing accounts	1 2 3 4 5 6 7
g) I believe it is rude to inquire about a person's salary	1 2 3 4 5 6 7
h) I prefer to save money because I'm never sure when things will collapse and I'll need cash	1 2 3 4 5 6 7
i) I am proud of my ability to save money	1 2 3 4 5 6 7
j) I always pay my bills promptly	1 2 3 4 5 6 7
k) My attitude toward money is very similar to that of my parents	1 2 3 4 5 6 7

15. Choose one of the following statements that comes closest to the amount of financial risk that you are willing to take when you save, or make investments. Indicate the one answer that applies best to you.

Take substantial financial risk expecting to earn substantial returns	☐
Take above average financial risks expecting to earn above average returns	☐
Take average financial risk expecting average returns	☐
Take below average financial risk expecting below average returns	☐
Not willing to take any financial risks	☐

16. Thinking about technology in general, would you agree or disagree with the following statements.	Strongly Disagree...Strongly Agree
a) I do not consider it safe giving out my credit card number over the internet	1 2 3 4 5 6 7
b) I worry that the information I send over the Internet will be seen by other people	1 2 3 4 5 6 7
c) I do not feel confident doing business with a company that can only be reached online	1 2 3 4 5 6 7
d) Any business transaction that I do electronically should be confirmed later with something in writing on paper	1 2 3 4 5 6 7
e) Whenever information gets automated, it's important to check carefully that the computer is not making mistakes	1 2 3 4 5 6 7
f) When providing information over the Internet, I can never be sure it really gets to the right place	1 2 3 4 5 6 7

17. Please evaluate the following statements on a seven point scale where 1 is strongly disagree and 7 is strongly agree	Strongly Disagree....Strongly Agree
a) I like to continue doing the same old things rather than trying new and different things	1 2 3 4 5 6 7
b) I like to experience novelty and change in my daily routine	1 2 3 4 5 6 7
c) I like a job that offers change, variety and travel even if it involves some danger	1 2 3 4 5 6 7
d) I am continually seeking new ideas and experiences	1 2 3 4 5 6 7
e) I like continually changing activities	1 2 3 4 5 6 7
f) When things get boring I like to find some new and unfamiliar experience	1 2 3 4 5 6 7
g) I prefer a routine way of life to an unpredictable one, full of change	1 2 3 4 5 6 7
h) I am generally open to accepting new ideas	1 2 3 4 5 6 7
i) I am willing to try new things	1 2 3 4 5 6 7
j) I tend to feel that new ways of living and doing things are improvements over the past	1 2 3 4 5 6 7
k) I feel that I am an innovative person	1 2 3 4 5 6 7
l) In general I was among the last in my circle of friends to adopt online banking	1 2 3 4 5 6 7

17. (Continued) Please evaluate the following statements on a seven point scale where 1 is strongly disagree and 7 is strongly agree	Strongly Disagree....Agree
m) I know more about online banking than other people	1 2 3 4 5 6 7
n) Compared to my friends I don't do much online banking	1 2 3 4 5 6 7
o) Compared to my friends I seek out relatively little information from bank websites	1 2 3 4 5 6 7
p) I would consider using an online bank service or investing in something online even if I hadn't heard of it before	1 2 3 4 5 6 7
q) I am strongly committed to my own beliefs	1 2 3 4 5 6 7
r) My own beliefs are very clear	1 2 3 4 5 6 7
s) It is hard for me to change my ideas	1 2 3 4 5 6 7
t) I usually do not change what I think after a discussion	1 2 3 4 5 6 7
u) I find my opinion to be changeable	1 2 3 4 5 6 7
v) After participating in a informal debate, I always have the feeling that I was right	1 2 3 4 5 6 7
w) It could be said that I am likely to shift my attitudes	1 2 3 4 5 6 7
x) I often vary or alter my views when I discover new information	1 2 3 4 5 6 7
y) After forming an impression of something it's often hard for me to modify that impression	1 2 3 4 5 6 7
z) My ideas are very stable and remain the same over time	1 2 3 4 5 6 7
aa) I have never changed the way I see most things	1 2 3 4 5 6 7
bb) What I think is usually right	1 2 3 4 5 6 7
cc) My opinions fluctuate a lot	1 2 3 4 5 6 7
dd) I often have doubts about the validity of my attitudes	1 2 3 4 5 6 7
ee) If it is necessary I can easily alter my beliefs	1 2 3 4 5 6 7
ff) I have often changed my opinion	1 2 3 4 5 6 7

18. At many different banks do you have accounts or services?

Record actual number_____

19. How many credit cards do you have? Be sure to include bank credit cards as well as store or gas credit cards

Record actual number_____

20) Which bank methods do you use in an average month?		20a-e) How long have you been using each method? (record number of years)
a) Automated Banking Machine (ABM)		
b) Traditional Bank Branch		
c) 'In Store' Branch in Grocery Store		
d) Telephone banking		
e) Online banking		

21) Which of the following methods do you use to pay bills in an average month?		21 a-i) How long have you been using each method? (record number of years)
a) Automated Banking Machine (ABM)		
b) Traditional Bank Branch		
c) 'In Store' Branch in Grocery Store		
d) Telephone banking		
e) Online banking		
f) Automatic deductions taken from your account		
g) Automatic payments made on your credit card		
h) By cheque sent in the Mail		
i) By cheque dropped off at the company		

22. Thinking about the paper bills and statements you receive, using a scale where 1 is not at all my usual behaviour and 7 is very much my usual behaviour would you say that you...

	Not at all My usual Behaviour				Very Much My usual Behaviour			
a) Throw out without opening the envelope	1	2	3	4	5	6	7	
b) Keep for future reference without opening the envelope	1	2	3	4	5	6	7	
c) Open the envelope and use for some purpose	1	2	3	4	5	6	7	

23) If you have opened the envelope and used the paper bill or statement for any purpose, what was it? (Check all that apply):

- Used the paper bill as a reminder to pay the bill ☐
- Referred to the paper bill while paying bills using online banking ☐
- Used the paper bill as a place to record the confirmation number after paying an online bill ☐
- Referred to the paper bill while paying bills at the Automatic Banking Machine ☐
- Referred to the paper bill while paying bills using telephone banking ☐
- Used the paper bill as a place for the bank staff to put the bank stamp on it after paying a bill at the bank ☐
- Checked that the items on the statement were correct ☐
- Filed for future reference ☐
- Other ☐

24) How would you rate your skill level in using the Internet?

- Expert
- Very Skilled
- Fairly Skilled
- Not Very Skilled
- No Skill

DEMOGRAPHIC INFORMATION

AGE:

What age range do you currently fall into? Would it be...(RECORD ACTUAL BUT USE THESE CATEGORIES ON TABLES)

- 18 to 24 years
- 25 to 34 years
- 35 to 44 years
- 45 to 54 years
- 55 to 64 years
- 65+

EDUCATION:

What is the highest level of education you have completed to date?

- Elementary
- High school
- College
- University Bachelor's (B.A.)
- University Master's (M.A.)
- University Doctorate (PhD)

EMPLOYMENT:

Are you currently...

Employed full-time

Employed part-time

Homemaker

Between jobs

Student

Retired

INCOME:

Which of the following categories reflects the total income before taxes of all members of your household in 2008?

Less than \$19,000

\$20,000 to \$39,999

\$40,000 to \$59,999

\$60,000 to \$79,999

\$80,000 to \$99,999

\$100,000+

LANGUAGE:

What is the language you first learned at home in your childhood and that you still understand?

French

English

Other

French and English

French and other

English and other

GENDER:

And you are...

A man

A woman

APPENDIX F

DEMOGRAPHIC PROFILE OF RESPONDENTS

Initial Sample	N=1054
Gender	%
Male	46.4
Female	53.6

Initial Sample	N=1054
Age (Years)	%
18-24	3.8
25-34	15.9
35-44	26.8
45-54	30.4
55-64	12.8
65 and older	10.3
Mean	46 years

Initial Sample	N=1054
Education Completed	%
Elementary	0.3
High School	21.8
College	35
University (Undergraduate)	30
University (Graduate)	11.7

Initial Sample	N=1054
Income	%
Less than \$19.9K	2.9
\$20K-\$39.9K	7.7
\$40K-\$59.9K	12.8
\$60K-\$79.9K	12.7
\$80K-\$99.9K	9.6
\$100K and over	20.2
Not Stated	33.3
Mean	\$82,227.8

APPENDIX F (Continued)**DEMOGRAPHIC PROFILE OF RESPONDENTS (Continued)**

Initial Sample	N=1054
Geographic Location	%
Atlantic Provinces	7.8
Quebec (English only)	1.3
Ontario	47.7
Manitoba	5.8
Saskatchewan	6.4
Alberta	15.6
British Columbia	15.3

Initial Sample	N=1054
Employment Status	%
Full-time	57.8
Part-time	10.7
Homemaker	6.5
Between Jobs	3.1
Student	3.7
Retired	16.4

APPENDIX G

A COMPARISON OF THE DEMOGRAPHIC PROFILE OF STUDY SAMPLE AND STATISTICS CANADA SAMPLE OF ONLINE CANADIANS

Gender	Initial Study Sample %	Statistics Canada %
Male	46.4	45.4
Female	53.6	54.6

Age (Years)	Initial Study Sample %	Statistics Canada %
18-24	3.8	10.2
25-34	15.9	20.5
35-44	26.8	23.2
45-54	30.4	22.1
55-64	12.8	15.5
65 and older	10.3	8.6

Education Completed	Initial Study Sample %	Statistics Canada %
High School or Less	22.1	31.5
College	35.0	46.2
University	41.7	22.3

Income	Initial Study Sample %	Statistics Canada %
Less than \$39.9K	10.6	32.3
\$40K-\$59.9K	12.8	21.5
\$60K and over	42.5	46.2
Not Stated	33.3	--

APPENDIX G (Continued)

A COMPARISON OF THE DEMOGRAPHIC PROFILE OF STUDY SAMPLE AND STATISTICS CANADA SAMPLE OF ONLINE CANADIANS (Continued)

Geographic Location	Initial Study Sample %	Statistics Canada %
Atlantic Provinces	7.8	18.9
Quebec (English only)	1.3	2.2
Ontario	47.7	35.5
Manitoba	5.8	8.1
Saskatchewan	6.4	8.7
Alberta	15.6	12.3
British Columbia	15.3	14.3

Employment Status	Initial Study Sample %	Statistics Canada %
Full-time	57.8	59.4
Part-time	10.7	12.9
Other	29.7	27.6

APPENDIX H

Table 1 - Univariate Summary Statistics for Continuous Variables

Behaviour of Resistance to Discontinuing the Paper Bill

Item	Mean	Standard Deviation	T-Value	Skewness	Kurtosis
THROW	1.53	1.30	34.46	2.76	7.01
NOOPEN	2.08	1.75	34.65	1.51	1.05
EbilPrt	0.50	0.88	16.42	4.25	25.56
PbillsE	3.60	2.51	41.66	2.16	0.63
PROBIL	0.77	0.24	92.02	-1.10	0.63
EBILs	1.92	2.23	25.12	1.87	4.69
NUMBB	2.16	1.05	60.05	1.16	2.03
NUMCRC	2.98	1.99	43.65	1.51	4.24
OPENENVL	5.20	2.05	74.13	-0.98	-0.31
Pbills	6.62	4.00	48.55	1.52	4.84

Intention

IPB	4.17	2.28	53.45	-0.12	-1.47
IPS	4.00	2.41	48.2	0.02	-1.62
IPOB	3.25	2.24	42.18	0.55	-1.17
IPOS	3.20	2.27	41.09	0.06	-1.14
IPABMB	4.50	2.42	54.22	-0.34	-1.5
IPABMD	4.95	2.33	61.87	-0.68	-1.14
IPABMM	4.71	2.41	57.03	-0.48	-1.41
IPBANKBR	3.50	2.39	42.98	0.34	-1.47
IFEE	2.16	1.72	36.66	1.47	1.12

Attitude of Resistance to Discontinuing the Paper Bill

ARBGB	4.29	2.04	61.16	-0.26	-1.13
ARWWB	4.62	1.86	72.62	-0.44	-0.74
ARUNB	4.34	1.93	65.75	-0.27	-0.93
ARUUB	4.57	1.82	73.07	-0.44	-0.64
ARFWB	4.50	1.92	68.55	-0.38	-0.89

APPENDIX H (Continued)

Table 1 - Univariate Summary Statistics for Continuous Variables (Continued)

Item	Mean	Standard Deviation	T-Value	Skewness	Kurtosis
Habit					
HFREQ	5.56	1.81	88.01	-1.10	0.20
HAUTO	5.85	1.55	11.38	-1.60	2.07
HNODO	5.67	1.75	94.52	-1.40	1.08
HLONTIM	6.23	1.41	128.96	-2.36	5.28
Authenticity					
AUINDSPE	5.15	1.97	76.17	-0.84	-0.49
AUBEST	5.01	2.03	71.87	-0.71	-0.78
AULEG	5.23	1.97	77.61	-0.95	-0.30
AUEVDISP	5.58	1.84	88.19	-1.25	-0.44
AUTANLK	5.10	2.03	73.14	-0.82	-0.62
Aesthetics-Function					
ADETINF	5.70	1.62	102.39	-1.35	1.12
ALAIID	5.06	1.91	77.36	-0.81	-0.38
AINFPAP	5.30	1.94	79.49	-0.99	-0.15
AMAIL	4.28	2.16	57.60	-0.27	-1.13
Aesthetics-Form					
AWGT	2.12	1.58	39.06	1.35	0.90
ACOLOUR	1.97	1.51	37.93	1.54	1.47
ASIZE	2.34	1.79	38.52	1.10	-0.01
AFONT	3.42	1.97	50.58	0.18	-1.19
ALOGO	3.82	2.20	50.63	0.05	-1.41
AFEEL	1.92	1.45	38.66	1.58	1.69

APPENDIX H (Continued)

Table 1 - Univariate Summary Statistics for Continuous Variables (Continued)

Redundancy					
Item	Mean	Standard Deviation	T-Value	Skewness	Kurtosis
URACES	5.08	2.07	71.74	-0.77	-0.73
URDELET	4.95	2.12	68.07	-0.67	-0.94
UFWPCONF	5.06	2.20	67.01	-0.78	-0.89
Permanency					
UPDETCG	4.78	2.11	65.91	-0.55	-1.06
UPFUTCG	5.54	1.81	89.08	-1.23	0.48
UPDECISN	5.55	1.87	86.76	-1.29	0.57
Facilitates Financial Work Processes					
HMULTI	4.06	2.17	54.47	-0.03	-1.34
UFWPREM	5.13	2.13	70.07	-0.86	-0.69
UFWPSCON	4.50	2.24	58.58	-0.33	-1.38
UFWPSCAN	4.78	2.14	64.97	-0.54	-1.09
UFWPCMPR	5.21	1.95	77.76	-0.92	-0.36
UFWPIMP	4.88	2.18	65.10	-0.62	-1.05
UFWBEST	4.80	2.14	65.35	-0.58	-1.06
UFWPCRA	5.11	2.07	72.14	-0.84	-0.62
Warranty					
UWNOWELL	5.41	1.84	85.86	-1.11	0.24
UWINFREQ	5.20	1.93	78.69	-0.92	-0.28
UWMISU	5.15	2.01	72.57	-0.86	-0.63
UWMISCC	5.11	2.07	72.09	-0.82	-0.66
UWMISB	5.11	2.04	72.88	-0.83	-0.60

APPENDIX H (Continued)

Table 1 - Univariate Summary Statistics for Continuous Variables (Continued)

Bank Reaction					
Item	Mean	Standard Deviation	T-Value	Skewness	Kurtosis
NOCONB	5.28	1.99	77.47	-1.0	-0.25
NOBELFB	5.12	1.99	75.12	-0.84	-0.51
NOWILB	4.87	2.00	70.87	-0.66	-0.75
Irresponsible					
NOFINIRB	3.77	2.05	53.58	0.11	-1.23
NOFINIRC	3.85	2.06	54.51	0.07	-1.24
NOFINIRU	3.79	2.03	54.50	0.11	-1.2
Aversion to Dependence					
NEPDEPC	5.10	2.05	72.53	-0.80	-0.68
NEPDEPU	5.02	2.05	71.24	-0.073	-0.76
NEPDEPB	5.00	2.08	69.58	-0.70	-0.82
Insecure					
NOINSECC	4.45	2.04	63.57	-0.36	-1.11
NOINSECU	4.44	2.04	63.3	-0.33	-0.11
NOINSECB	4.42	2.04	63.7	-0.31	-0.12

APPENDIX H (Continued)

Table 1 - Univariate Summary Statistics for Continuous Variables (Continued)

Financial Risk Tolerance

Item	Mean	Standard Deviation	T-Value	Skewness	Kurtosis
MCC	5.24	1.32	106.57	-0.58	0.27
MCWELL	5.00	1.57	93.45	-0.56	-0.39
MCPENIN	5.88	1.46	117.48	-1.36	1.20
MCPENY	4.31	1.79	70.04	-0.32	-0.90
MCCASH	4.42	2.21	58.30	-0.30	-1.37
MCSAVE	5.46	1.52	104.87	-0.99	0.36
MCCAL	5.60	1.57	104.02	-1.09	0.48
MCCOLL	5.15	1.45	103.87	-0.51	-0.32
MCPROUD	4.76	1.70	81.80	-0.40	-0.69
MCPRMT	6.02	1.34	131.43	-1.44	1.41
MCPAR	4.81	1.71	81.91	-0.49	-0.64

Technical Risk Tolerance

TCC	3.88	1.85	61.21	0.11	-1.11
TPEOPLE	4.35	1.76	72.18	-0.31	-0.89
TOCOMP	4.50	2.00	65.76	-0.30	-1.18
TOCONFP	4.35	1.97	64.38	-0.14	-1.21
TMISTK	5.39	1.64	95.88	-0.95	0.13
TORFRPLC	4.08	1.77	67.30	-0.06	-0.97

APPENDIX H (Continued)

Table 2 – Number of Items and Cronbach's α For Each Construct

Constructs	Number of Items	Cronbach's α
Behaviour	9	0.557
Intention	9	0.883
Attitude	5	0.894
Habit	4	0.859
Authenticity	5	0.942
Aesthetics-Form	6	0.826
Aesthetics-Function	4	0.705
Redundancy	3	0.871
Permanency	3	0.831
Facilitates Financial Work Processes	8	0.932
Warranty	5	0.936
Bank Reaction	3	0.946
Aversion to Dependence	3	0.966
Irresponsible	3	0.970
Insecure	3	0.965
Technical Risk Tolerance	6	0.836
Financial Risk Tolerance	11	0.791

APPENDIX I

Labelling of Short-Form Items Used in the Structural Equation Modeling Analysis

Construct	Indicator
Behaviour of Resistance to Discontinuing the Paper Bill (η_1)	
Number of Paper Bills Received	PBills
Number of Electronic Bills Received	EBills
Y1: Proportion of paper bills received divided by the number of paper and electronic bills received	PROPBill
Y2: Proportion of paper bills received that are/could be printed out	PbilE
Y3: Proportion of electronic bills received that are printed	EbilPrt
Y4: Number of credit cards	NUMCR
Y5: Number of bank accounts	NUMB
Y6: Behaviour with Envelope - Throw	THROW
Y7: Behaviour with Envelope – Keep	KEEP
Y8: Behaviour with Envelope - Open	OPEN

Construct	Indicator
Attitude of Resistance to Discontinuing the Paper Bill (η_{3_1})	
Y9: A bad idea- A good idea	ARBGB
Y10: Worthless-Worthwhile	ARWWB
Y11: Unnecessary-Necessary	ARUNB
Y12: Useless-Useful	ARUUB
Y13: Foolish-Wise	ARFWB

Construct	Indicator
Attitude of Resistance to Discontinuing the Paper Bank Account Statement (η_{3_2})	
Y14: A bad idea- A good idea	ARBGS
Y15: Worthless-Worthwhile	ARWWS
Y16: Unnecessary-Necessary	ARUNS
Y17: Useless-Useful	ARUUS
Y18: Foolish-Wise	ARFWS

APPENDIX I (Continued)

Identification of Short-Form Indicators Used in the Structural Equation Modeling Analysis (Continued)

Construct	Indicator
Intention to Resist Discontinuing The Paper Bill (η_2)	
Y19: If I am given the choice, I am not going to stop receiving paper bills	IPB
Y20: If I am given the choice, I am not going to stop receiving paper bank account statements	IPS
Y21: I am not going to stop printing out bills that I receive online	IPOB
Y22: I am not going to stop printing out bank account statements that I receive online	IPOS
Y23: I am not going to stop printing out the paper receipt at the Automated Banking Machine when I pay a bill	IPABMB
Y24: I am not going to stop printing out the paper receipt at the Automated Banking Machine when I make a deposit	IPABMD
Y25: I am not going to stop printing out the paper receipt at the Automated Banking Machine when I take out money	IPABMM
Y26: If my bank were to stop sending me a paper statement, I would print one out at the branch or Automated Banking Machine	IPBANKBR
Y27: I would pay a fee rather than stop receiving a paper bill or statement from a company	IFEE

Construct	Indicator
Habit (ξ_1)	
X1: I receive paper bills and statements frequently	HFREQ
X2: I receive paper bills and statements automatically without any effort on my part	HAUTO
X3: I receive paper bills and statements without having to consciously do anything	HNODO
X4: I would find it difficult not to receive paper bills and statements	HDIFF
X5: I have been receiving paper bills and statements for a long time	HLONTIM

APPENDIX I (Continued)

Identification of Short-Form Indicators Used in the Structural Equation Modeling Analysis (Continued)

Construct	Indicator
Aesthetics (ξ₂)	
X6: Contains detailed transaction information	ADETINF
X7: Weight of the paper that the company uses	AWGT
X8: The bill or statement is printed in colour	ACOLOR
X9: The size of the paper that the company uses	ASIZE
X10: Font size used in printing the text	AFONT
X11: The way the information is laid out	ALAI
X12: The company logo that is on it	ALOGO
X13: The feel of the paper that the company uses	AFEEL
X14: That the information is on paper	AINFPAP
X15: That the bill or statement comes in the mail	AMAIL

Construct	Indicator
Authenticity (ξ₃)	
X16: I believe that paper bills and statements are indisputable evidence of my routine financial transactions	AUINDSIP
X17: I believe that paper bills and statements are the best evidence of my routine financial transactions	AUBEST
X18: I consider paper bills and statements to be legitimate proof of my routine financial transactions	AULEG
X19: Paper bills and statements provide valid evidence in the case of a dispute or disagreement with the company or bank	AUDISPUT
X20: For many services, paper bills and statements are the only tangible link I have with the company or bank with whom I do business	AUTANLK

APPENDIX I (Continued)

Identification of Short-Form Indicators Used in the Structural Equation Modeling Analysis (Continued)

Construct	Indicator
Permanency (ξ5)	
X24: Paper bills and statements are a better way to receive information because they can't be changed or altered without detection	UPDETCG
X25: Paper bills and statements can be accessed and read at a future time regardless of changes in computer software or hardware	UPFUTCG
X26: Unlike electronic bills and statements, I make the decision how long I keep paper bills and statements for future reference	UPDECISN

Construct	Indicator
Facilitates Financial Work Processes (ξ6)	
X27: The more bank methods (e.g. ABM, branch, online, telephone) I use, the more I prefer to receive paper bills and statements	HMULTI
X28: I use the paper bill as a reminder to pay my bill	UFWPREM
X29: I prefer paper bills and statements because I don't have to be at my computer and on the internet to look at them	UFWPCOIN
X30: I find it quicker and easier to scan through paper bills and statements to find the information I need	UFWPSCAN
X31: I can compare month over month paper bills and statements without much effort	UFWPCMPR
X33: Paper bills and statements are an important part of the way I manage my household finances	UFWPIMP
X34: I believe that the paper bill or statement is the best way to keep accurate financial records	UFWPBEST

Construct	Indicator
Redundancy (ξ4)	
X21: It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I can't access my computer or the internet	URACES
X22: It is important to me to have a back up to my electronic information in the form of a paper bill or statement in case I delete the electronic notification or don't notice it in my inbox	URDELET
X23: When I pay bills online, it is best to use the paper bill to record the confirmation number from the screen	UFWPCONF

APPENDIX I (Continued)

Identification of Short-Form Indicators Used in the Structural Equation Modeling Analysis (Continued)

Construct	Indicator
Warranty (ξ7)	
X35: I feel more comfortable receiving a paper bill from a company that I don't know well	UWNOWELL
X36: I feel more comfortable receiving a paper bill from company that I deal with infrequently	UWINFREQ
X37: When companies make mistakes, I need the paper bill as proof that the transaction occurred incorrectly	UWMISU
X38: When credit card companies make mistakes, I need the paper credit card statement as proof that the transaction occurred incorrectly	UWMISCC
X39: When banks make mistakes, I need the paper statement as proof that the transaction occurred incorrectly	WUMISB
X40: The paper bill is important to me as proof to a business or the Canadian Revenue Agency in order to claim business expenses or tax deductions	UFWPCRA

APPENDIX I (Continued)

Identification of Short-Form Indicators Used in the Structural Equation Modeling Analysis (Continued)

Construct	Indicator
Reaction of Banks (ξ8)	
X41: When I have a problem with my account that is not my fault, having the paper statement increases my confidence in dealing with the bank	NOCONB
X42: When I have a problem with my account that is not my fault, having my paper statement increases the likelihood that the bank will believe me	NOBELFB
X43: When I have a problem with my account that is not my fault, my bank's willingness to help me increases if I have the paper statement	NOWILLB

Construct	Indicator
Irresponsible (ξ9)	
X44: If I didn't have the paper statement when I have a problem with my account, the bank would think that I was financially irresponsible	NOFINIRB
X45: If I did not have the credit card statement when I have a problem with my account, the credit card company would think that I was financially irresponsible	NOFINIRCC
X46: If I did not have the paper bill when I have a problem with my billing account, the utility company would think that I was financially irresponsible	NOFINIRU

Construct	Indicator
Aversion to Dependence (ξ10)	
X47: It concerns me that if I don't keep the paper bill, I would have to depend on the credit card company to provide me with the information	NEPDEPCC
X48: It concerns me that if I don't keep the paper bill, I would have to depend on the utility company to provide me with the information	NEPDEPU
X49: It concerns me that if I don't keep the paper statement, I would have to depend on the bank to provide me with the information	NEPDEPB

APPENDIX I (Continued)

Identification of Short-Form Indicators Used in the Structural Equation Modeling Analysis (Continued)

Construct	Indicator
Insecure (ξ_{11})	
X50 If I didn't have the paper statement when I had a problem with my credit card account, their reaction would make me feel insecure	NOINSECCC
X51: If I didn't have the paper bill when I had a problem with my utility company account, their reaction would make me feel insecure	NOINSECU
X52: If I didn't have the paper statement when I had a problem with my bank account, their reaction would make me feel insecure	NOINSECB

APPENDIX I (Continued)

Identification of Short-Form Indicators Used in the Structural Equation Modeling Analysis (Continued)

Construct	Indicator
Financial Risk Tolerance (ξ12)	
X53: I use my money very carefully	MCC
X54: I budget my money very well	MCWELL
X55: I pay my bills immediately to avoid interest or penalties	MCPENIN
X56: I know to the penny how much money I have in my purse, wallet or pocket at all times	MCPENY
X57: I prefer to use cash or a debit card, rather than credit cards	MCCASH
X58: I always know how much I have in my savings and /or chequing accounts	MCSAVE
X59: I believe it is rude to inquire about a person's salary	MCSAL
X60: I prefer to save money because I'm never sure when things will collapse and I'll need cash	MCCOLL
X61: I am proud of my ability to save money	MCPROUD
X62: I always pay my bills promptly	MCPROMT
X63: My attitude toward money is very similar to that of my parents	MCPAR

Construct	Indicator
Technical Risk Tolerance (ξ13)	
X64: I do not consider it safe giving out my credit card number over the internet	TCC
X65: I worry that the information I send over the Internet will be seen by other people	TPEOPLE
X66: I do not feel confident doing business with a company that can only be reached online	TOCOMP
X67: Any business transaction that I do electronically should be confirmed later with something in writing on paper	TCONFP
X68: Whenever information gets automated, it's important to check carefully that the computer is not making mistakes	TMISTK
X69: When providing information over the Internet, I can never be sure it really gets to the right place	TORGTPLC

APPENDIX J

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted

Behaviour of Resistance to Discontinuing the Paper Bill						
	Original Items			Final Items		
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
EbilPrt	0.14	0.02	0.98	--	--	--
Open	0.25	0.06	0.94	--	--	--
Throw	-0.24	0.06	0.94	--	--	--
Keep	-0.13	0.02	0.98	--	--	--
NUMCRC	0.15	0.02	0.98	--	--	--
NUMB	0.02	0.00	1.00	--	--	--
PROPBills	0.70	0.49	0.51	0.80	0.64	0.36
PbillsE	0.41	0.17	0.83	0.43	0.18	0.82
Composite Reliability	0.19			0.56		
Variance Extracted	0.10			0.41		

Intention to Resist Discontinuing the Paper Bill						
	Original Items			Final Items		
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
IPB	0.81	0.66	0.34	0.86	0.74	0.25
IPOB	0.70	0.49	0.52	0.70	0.49	0.51
IPABMB	0.65	0.42	0.57	--	--	--
IPABMD	0.60	0.36	0.64	--	--	--
IPABMM	0.60	0.36	0.63	--	--	--
IPBANKBR	0.67	0.45	0.56	--	--	--
IPS	0.81	0.66	0.34	0.82	0.67	0.32
IPOS	0.70	0.49	0.5	0.70	0.49	0.50
IFEE	0.45	0.20	0.8	--	--	--
Composite Reliability	0.88			0.86		
Variance Extracted	0.45			0.60		

APPENDIX J (Continued)

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Continued)

Attitude of Resistance to Discontinuing the Paper Bill						
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
ARBGB	0.60	0.36	0.64	0.60	0.36	0.64
ARWWB	0.83	0.69	0.30	0.83	0.69	0.32
ARUNB	0.85	0.72	0.28	0.84	0.71	0.29
ARUUB	0.91	0.83	0.17	0.92	0.85	0.16
ARFWB	0.83	0.69	0.31	0.84	0.71	0.30
Composite Reliability	0.90			0.90		
Variance Extracted	0.75			0.75		

Redundancy						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
URACES	0.91	0.83	0.17	0.91	0.83	0.17
URDELET	0.90	0.81	0.20	0.90	0.81	0.20
UFWPCONF	0.81	0.66	0.35	0.81	0.66	0.35
Composite Reliability	0.91			0.91		
Variance Extracted	0.76			0.76		
Permanency						
UPDETCG	0.89	0.79	0.21	0.88	0.77	0.22
UPFUTCG	0.79	0.62	0.38	0.79	0.62	0.37
UPDECISN	0.80	0.64	0.36	0.80	0.64	0.36
Composite Reliability	0.87			0.87		
Variance Extracted	0.68			0.68		

APPENDIX J (Continued)

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Continued)

Facilitates Financial Work Processes						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
HMULTI	0.80	0.64	0.36	0.80	0.64	0.36
UFWPREM	0.78	0.61	0.39	0.78	0.61	0.39
UFWPCOIN	0.86	0.74	0.26	0.87	0.76	0.25
UFWPCAN	0.88	0.77	0.23	0.88	0.77	0.22
UFWPCMPR	0.82	0.67	0.35	0.82	0.67	0.33
UFWPIMP	0.92	0.85	0.16	0.92	0.85	0.16
UFWPBEST	0.93	0.86	0.13	0.93	0.86	0.14
UFWCRA	0.60	0.36	0.64	--	--	--
Composite Reliability	0.95			0.95		
Variance Extracted	0.69			0.74		
Warranty						
UWINFREQ	0.83	0.69	0.31	--	--	--
UWNOWELL	0.82	0.67	0.33	0.79	0.62	0.38
UWMISU	0.94	0.88	0.12	0.95	0.90	0.10
UWMISCC	0.94	0.88	0.12	0.95	0.90	0.10
UWMISB	0.92	0.85	0.16	0.92	0.85	0.16
Composite Reliability	0.95			0.95		
Variance Extracted	0.79			0.82		

APPENDIX J (Continued)

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Continued)

Authenticity						
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
AUINDSPE	0.94	0.88	0.12	0.94	0.88	0.12
AUBEST	0.94	0.88	0.12	0.94	0.88	0.13
AULEG	0.94	0.88	0.11	0.94	0.88	0.11
AUEVDISP	0.88	0.77	0.22	0.88	0.77	0.22
AUTANLK	0.83	0.69	0.32	0.83	0.69	0.32
Composite Reliability	0.96			0.96		
Variance Extracted	0.82			0.82		

Aesthetics (Form)						
AWGT	0.81	0.66	0.34	0.81	0.66	0.34
ACOLOR	0.83	0.69	0.31	0.82	0.67	0.32
ASIZE	0.81	0.66	0.34	0.82	0.67	0.33
AFONT	0.57	0.32	0.67	--	--	--
AFEEL	0.75	0.56	0.43	--	--	--
Composite Reliability	0.87			0.86		
Variance Extracted	0.58			0.67		

Aesthetics (Function)						
AL Aid	0.70	0.49	0.51	0.71	0.50	0.50
AINFPAP	0.78	0.61	0.39	0.81	0.66	0.34
ADETINF	0.67	0.45	0.56	0.73	0.53	0.47
AMAIL	0.8	0.64	0.36	--	--	--
ALOGO	0.56	0.31	0.69	--	--	--
Composite Reliability	0.83			0.79		
Variance Extracted	0.50			0.56		

APPENDIX J (Continued)

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Continued)

Reaction of Bank						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
NOCONB	0.94	0.88	0.11	0.94	0.88	0.11
NOBELFB	0.96	0.92	0.08	0.96	0.92	0.08
NOWILLB	0.90	0.81	0.19	0.90	0.81	0.19
Composite Reliability	0.95			0.95		
Variance Extracted	0.87			0.87		
Irresponsibility						
NOFINIRB	0.97	0.94	0.06	0.97	0.94	0.06
NOFINIRC	0.98	0.96	0.05	0.98	0.96	0.05
NOFINIRU	0.97	0.94	0.06	0.97	0.94	0.06
Composite Reliability	0.98			0.98		
Variance Extracted	0.94			0.94		
Aversion to Dependence						
NEPDEPC	0.96	0.92	0.07	0.96	0.92	0.07
NEPDEPU	0.98	0.96	0.05	0.98	0.96	0.05
NEPDEPB	0.96	0.92	0.08	0.96	0.92	0.05
Composite Reliability	0.98			0.98		
Variance Extracted	0.93			0.94		
Insecure						
NOINSECC	0.98	0.96	0.05	0.98	0.96	0.05
NOINSECU	0.98	0.96	0.04	0.98	0.96	0.04
NOIBSECB	0.97	0.94	0.07	0.97	0.94	0.07
Composite Reliability	0.98			0.98		
Variance Extracted	0.95			0.95		

APPENDIX J (Continued)

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Continued)

Financial Risk Tolerance						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
MCC	0.82	0.67	0.32	0.83	0.69	0.31
MCWELL	0.86	0.74	0.27	0.94	0.88	0.12
MCPENIN	0.59	0.35	0.66	--	--	--
MCPENY	0.48	0.23	0.77	--	--	--
MCCASH	-0.06	0.00	1.00	--	--	--
MCSAVE	0.50	0.25	0.75	--	--	--
MCSAL	0.21	0.04	0.95	--	--	--
MCCOLL	0.57	0.32	0.67	--	--	--
MCPROUD	0.75	0.56	0.44	0.70	0.49	0.51
MCPROMT	0.57	0.32	0.67	--	--	--
MCPAR	0.50	0.25	0.75	--	--	--
Composite Reliability	0.82			0.87		
Variance Extracted	0.34			0.69		
Technical Risk Tolerance						
TCC	0.70	0.49	0.51	0.79	0.62	0.38
TPEOPLE	0.72	0.52	0.49	0.79	0.62	0.37
TOCOMP	0.66	0.44	0.56	0.64	0.41	0.59
TCONFP	0.75	0.56	0.44	--	--	--
TMISTK	0.62	0.38	0.61	--	--	--
TORFTPLC	0.73	0.53	0.47	0.71	0.50	0.49
Composite Reliability	0.85			0.82		
Variance Extracted	0.49			0.54		

APPENDIX J (Continued)

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Continued)

Habit							
	Factor Loading	(Factor Loading)²	Error		Factor Loading	(Factor Loading)²	Error
HFREQ	0.85	0.72	0.27		0.85	0.72	0.27
HAUTO	0.82	0.67	0.33		0.82	0.67	0.33
HNODO	0.76	0.58	0.42		0.76	0.58	0.42
HLONTIM	0.76	0.58	0.42		0.76	0.58	0.42
Composite Reliability	0.88				0.88		
Variance Extracted	0.64				0.64		

APPENDIX K

Summary of Number and Names of Items Deleted and Items Remaining After CFA

Construct	Items on Survey	Number and Names of Items Deleted	Items Remaining After CFA	Composite Reliability	Average Variance Extracted
Behaviour of Resistance to Discontinuing the Paper Bill	9	6 items deleted (EbilPrt, Open, Throw, Keep, NUMCR, NUMB)	3	0.56	0.41
Intention to Resist Discontinuing the Paper Bill	9	5 items deleted due to low factor loading (IPABMB, IPBANKBR, IFEE)	3	0.86	0.60
Attitude of Resistance to Discontinuing the Paper Bill	5	None	5	0.90	0.75
Authenticity	5	None	5	0.96	0.82
Aesthetics-Form	5	1 item deleted due to low factor loading (ALOGO) and 1 item deleted (AMAIL) to improve AVE because item meaning unrelated to other items	3	0.86	0.67
Aesthetics-Function	5	1 item deleted due to low factor loading (AFONT) and 1 item deleted (AFEEL) to improve CR	3	0.79	0.56

APPENDIX K

Summary of Number and Names of Items Deleted and Items Remaining After CFA

Construct	Items on Survey	Number and Names of Items Deleted	Items Remaining After CFA	Composite Reliability	Average Variance Extracted
Redundancy	3	None	3	0.91	0.76
Warranty	5	1 item deleted (UWINFREQ) due to high correlation with UWNOWELL	4	0.95	0.82
Permanence	3	None	3	0.87	0.68
Facilitates Financial Work Processes	8	1 item deleted due to low factor loading (UFWPCRA)	7	0.95	0.74
Insecurity	3	None	3	0.98	0.95
Irresponsible	3	None	3	0.98	0.94
Opinion of Bank	3	None	3	0.95	0.87
Aversion to Dependence	3	None	3	0.98	0.94
Financial Risk Tolerance	11	8 items deleted (MCPENIN, MCPENY, MCCASH, MCSAVE, MCSAL, MCCOLL, MCPROMT, MCPAR)	3	0.87	0.69
Technical Risk Tolerance	6	2 items deleted (TMISTK, TCON FP)	4	0.82	0.54
Habit	4	None	4	0.88	0.64
	90 items	62 items remain; 27 items deleted			

APPENDIX L

Table 1 - Average Variance Extracted and the Squared Correlations of the Constructs

AVE	BEH	Intend	Attid	Authen	AesthFor	AesthFun	UtilIP	UtilIR	UtilIW	UtilFWP	MC	Techno	NBReact	NAverD	NInsec	NInresp	AHabit
	0.41	0.6	0.75	0.82	0.67	0.56	0.68	0.82	0.91	0.74	0.7	0.54	0.87	0.94	0.95	0.94	0.64
Variance Extracted For Pair of Constructs																	
BEH	1	0.51	0.58	0.62	0.54	0.49	0.55	0.62	0.66	0.58	0.55	0.48	0.64	0.68	0.68	0.68	0.53g
Intend	0.29	1	0.68	0.71	0.64	0.58	0.64	0.71	0.76	0.67	0.65	0.57	0.74	0.77	0.78	0.77	0.62
Attid	0.00	0.01	1	0.79	0.71	0.66	0.72	0.79	0.83	0.75	0.72	0.65	0.81	0.85	0.85	0.85	0.70
Authen	0.38	0.26	0.00	1	0.75	0.69	0.75	0.82a	0.87	0.78b	0.76	0.68	0.85	0.88	0.89	0.88	0.73
AesthFor	0.02	0.01	0.02	0.02	1	0.62	0.68	0.75	0.79	0.71	0.68	0.61	0.77	0.81	0.81	0.81	0.66
AesthFun	0.31	0.38	0.01	0.26	0.01	1	0.62	0.69	0.74c	0.65	0.63	0.55	0.72	0.75	0.76	0.75	0.60
UtilIP	0.40	0.34	0.01	0.77	0.03	0.52	1	0.75d	0.80	0.71e	0.69	0.61	0.78	0.81	0.82	0.81	0.66
UtilIR	0.41	0.32	0.01	0.85a	0.03	0.45	0.77d	1	0.87	0.78f	0.76	0.68	0.85	0.88	0.89	0.88	0.73
UtilIW	0.38	0.40	0.01	0.52	0.01	0.81c	0.69	0.66	1	0.83	0.80	0.73	0.89	0.93	0.93	0.93	0.78
UtilFWP	0.40	0.31	0.00	0.81b	0.04	0.44	0.76e	0.79f	0.62	1	0.72	0.64	0.81	0.84	0.85	0.84	0.69
MC	0.01	0.02	0.00	0.03	0.01	0.01	0.03	0.03	0.01	0.03	1	0.62	0.78	0.82	0.82	0.82	0.67
Techno	0.12	0.13	0.00	0.12	0.02	0.30	0.20	0.18	0.27	0.18	0.00	1	0.71	0.74	0.75	0.74	0.59
NBReact	0.37	0.41	0.00	0.52	0.01	0.74	0.66	0.64	0.77	0.61	0.01	0.25	1	0.91	0.91	0.91	0.76
NAverD	0.37	0.44	0.00	0.52	0.02	0.72	0.66	0.62	0.74	0.61	0.01	0.24	0.71	1	0.95	0.94	0.79
Ninsec	0.29	0.35	0.00	0.35	0.03	0.64	0.50	0.48	0.61	0.45	0.01	0.21	0.58	0.56	1	0.95	0.80
Niresp	0.19	0.22	0.00	0.19	0.06	0.52	0.34	0.30	0.45	0.29	0.01	0.17	0.41	0.41	0.36	1	0.79
AHabit	0.59g	0.27	0.00	0.61	0.03	0.42	0.61	0.62	0.55	0.59	0.02	0.17	0.53	0.52	0.41	0.27	1

Note: The letters that follow selected numbers in the table indicate squared correlation estimates that are larger than the average extracted for the two constructs

APPENDIX L (Continued)

**Table 2 – Revised Average Variance Extracted and the Squared Correlations of the Constructs
Attitude of Resistance to Discontinuing the Paper Bill/‘Attid’ Removed**

Squared Correlations Between Constructs																
	BEH	Intend	Authen	AesthFor	AesthFun	UtilP	UtilR	UtilIW	UtilFWP	MC	Techno	NBRReact	NAverD	NInsec	NInresp	AHabit
AVE	0.41	0.6	0.82	0.67	0.56	0.68	0.82	0.91	0.74	0.7	0.54	0.87	0.94	0.95	0.94	0.64
Variance Extracted For Pair of Constructs																
BEH	1	0.51	0.62	0.54	0.49	0.55	0.62	0.66	0.58	0.55	0.48	0.64	0.68	0.68	0.68	0.53g
Intend	0.38	1	0.71	0.64	0.58	0.64	0.71	0.76	0.67	0.65	0.57	0.74	0.77	0.78	0.77	0.62
Authen	0.44	0.56	1	0.75	0.69	0.75	0.82a	0.87	0.78b	0.76	0.68	0.85	0.88	0.89	0.88	0.73
AesthFor	0.03	0.06	0.02	1	0.62	0.68	0.75	0.79	0.71	0.68	0.61	0.77	0.81	0.81	0.81	0.66
AesthFun	0.27	0.24	0.26	0.01	1	0.62	0.69d	0.74c	0.65	0.63	0.55	0.72	0.75	0.76	0.75	0.60
UtilP	0.42	0.50	0.77	0.03	0.52	1	0.75f	0.80	0.71e	0.69	0.61	0.78	0.81	0.82	0.81	0.66
UtilR	0.45	0.61	0.85a	0.03	0.45	0.77d	1	0.87	0.78f	0.76	0.68	0.85	0.88	0.89	0.88	0.73
UtilIW	0.37	0.41	0.52	0.01	0.81c	0.69	0.66	1	0.83	0.80	0.73	0.89	0.93	0.93	0.93	0.78
UtilFWP	0.45	0.69	0.81b	0.04	0.42	0.76e	0.79f	0.62	1	0.72	0.64	0.81	0.84	0.85	0.84	0.69
MC	0.01	0.02	0.03	0.01	0.01	0.03	0.03	0.01	0.03	1	0.62	0.78	0.82	0.82	0.82	0.67
Techno	0.11	0.10	0.12	0.02	0.30	0.20	0.18	0.27	0.18	0.00	1	0.71	0.74	0.75	0.74	0.59
NBRReact	0.36	0.37	0.52	0.01	0.74	0.66	0.62	0.77	0.59	0.01	0.25	1	0.91	0.91	0.91	0.76
NAverD	0.36	0.38	0.50	0.02	0.72	0.66	0.62	0.74	0.59	0.01	0.24	0.71	1	0.95	0.94	0.79
Ninsec	0.28	0.31	0.35	0.03	0.64	0.50	0.46	0.61	0.45	0.01	0.21	0.58	0.56	1	0.95	0.80
Niresp	0.18	0.20	0.19	0.06	0.52	0.34	0.29	0.45	0.29	0.01	0.17	0.41	0.41	0.36	1	0.79
AHabit	0.59g	0.40	0.59	0.03	0.42	0.61	0.62	0.55	0.59	0.02	0.17	0.53	0.52	0.41	0.27	1

Note: The letters that follow selected numbers in the table indicate squared correlation estimates that are larger than the average extracted for the two constructs

APPENDIX M

Correlations of the Constructs

	BEH	Intend	Attid	Authen	AesthFor	AesthFun	UtilIP	UtilIR	UtilIW	UtilFWP	MC	Techno	NBReact	NAverD	Ninsec	Niresp	AHabit
BEH	1																
Intend	0.54	1															
Attid	0.01	0.12	1														
Authen	0.62	0.51	0.04	1													
AesthFor	0.14	0.11	0.14	0.14	1												
AesthFun	0.56	0.62	0.11	0.51	0.12	1											
UtilIP	0.63	0.58	0.11	0.88	0.18	0.72	1										
UtilIR	0.64	0.57	0.08	0.92	0.17	0.67	0.88	1									
UtilIW	0.62	0.63	0.1	0.72	0.1	0.9	0.83	0.81	1								
UtilFWP	0.63	0.56	0.06	0.9	0.21	0.66	0.87	0.89	0.79	1							
MC	0.12	0.15	0.06	0.18	0.11	0.08	0.16	0.17	0.12	0.17	1						
Techno	0.34	0.36	0.07	0.35	0.13	0.55	0.45	0.43	0.52	0.42	0.06	1					
NBReact	0.61	0.64	0.07	0.72	0.09	0.86	0.81	0.8	0.88	0.78	0.12	0.5	1				
NAverD	0.61	0.66	0.06	0.72	0.14	0.85	0.81	0.79	0.86	0.78	0.12	0.49	0.84	1			
Ninsec	0.54	0.59	0.06	0.59	0.16	0.8	0.71	0.69	0.78	0.67	0.11	0.46	0.76	0.75	1		
Niresp	0.44	0.47	0.05	0.44	0.25	0.72	0.58	0.55	0.67	0.54	0.09	0.41	0.64	0.64	0.6	1	
AHabit	0.77	0.52	0.02	0.78	0.18	0.65	0.78	0.79	0.74	0.77	0.14	0.41	0.73	0.72	0.64	0.52	1

APPENDIX N

Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted

Behaviour of Resistance to Discontinuing the Paper Bill						
	Original Items			Final Items		
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
EbilPrt	0.14	0.02	0.98	--	--	--
Open	0.25	0.06	0.94	--	--	--
Throw	-0.24	0.06	0.94	--	--	--
Keep	-0.13	0.02	0.98	--	--	--
NUMCRC	0.15	0.02	0.98	--	--	--
NUMB	0.02	0.00	1.00	--	--	--
PROPBills	0.70	0.49	0.51	0.80	0.64	0.36
PbillsE	0.41	0.17	0.83	0.43	0.18	0.82
Composite Reliability	0.19			0.56		
Variance Extracted	0.10			0.41		

Intention to Resist Discontinuing the Paper Bill						
	Original Items			Final Items		
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
IPB	0.81	0.66	0.34	0.86	0.74	0.25
IPOB	0.70	0.49	0.52	0.70	0.49	0.51
IPABMB	0.65	0.42	0.57	--	--	--
IPABMD	0.60	0.36	0.64	--	--	--
IPABMM	0.60	0.36	0.63	--	--	--
IPBANKBR	0.67	0.45	0.56	--	--	--
IPS	0.81	0.66	0.34	0.82	0.67	0.32
IPOS	0.70	0.49	0.50	0.70	0.49	0.50
IFEE	0.45	0.20	0.80	--	--	--
Composite Reliability	0.88			0.86		
Variance Extracted	0.45			0.60		

APPENDIX N (Continued)

Revised Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Attitude of Resistance to Discontinuing the Paper Bill Removed) (Continued)

Attitude of Resistance to Discontinuing the Paper Bill						
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
ARBGB	0.60	0.36	0.64	0.6	0.36	0.64
ARWWB	0.83	0.69	0.30	0.83	0.69	0.32
ARUNB	0.85	0.72	0.28	0.84	0.71	0.29
ARUUB	0.91	0.83	0.17	0.92	0.85	0.16
ARFWB	0.83	0.69	0.31	0.84	0.71	0.30
Composite Reliability	0.90			0.90		
Variance Extracted	0.75			0.75		

Redundancy						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
URACES	0.91	0.83	0.17	0.91	0.83	0.17
URDELET	0.90	0.81	0.20	0.9	0.81	0.20
UFWPCONF	0.81	0.66	0.35	0.81	0.66	0.35
Composite Reliability	0.91			0.91		
Variance Extracted	0.76			0.76		
Permanency						
UPDETCG	0.89	0.79	0.21	0.88	0.77	0.22
UPFUTCG	0.79	0.62	0.38	0.79	0.62	0.37
UPDECISN	0.80	0.64	0.36	0.80	0.64	0.36
Composite Reliability	0.87			0.87		
Variance Extracted	0.68			0.68		

APPENDIX N (Continued)

Revised Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Attitude of Resistance to Discontinuing the Paper Bill Removed) (Continued)

Facilitates Financial Work Processes						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
HMULTI	0.80	0.64	0.36	0.80	0.64	0.36
UFWPREM	0.78	0.61	0.39	0.78	0.61	0.39
UFWPCOIN	0.86	0.74	0.26	0.87	0.76	0.25
UFWPSCAN	0.88	0.77	0.23	0.88	0.77	0.22
UFWPCMPR	0.82	0.67	0.35	0.82	0.67	0.33
UFWPIMP	0.92	0.85	0.16	0.92	0.85	0.16
UFWPBEST	0.93	0.86	0.13	0.93	0.86	0.14
UFWCRA	0.60	0.36	0.64	--	--	--
Composite Reliability	0.95			0.95		
Variance Extracted	0.69			0.74		
Warranty						
UWINFREQ	0.83	0.69	0.31	--	--	--
UWNOWELL	0.82	0.67	0.33	0.79	0.62	0.38
UWMISU	0.94	0.88	0.12	0.95	0.90	0.10
UWMISCC	0.94	0.88	0.12	0.95	0.90	0.10
UWMISB	0.92	0.85	0.16	0.92	0.85	0.16
Composite Reliability	0.95			0.95		
Variance Extracted	0.79			0.82		

APPENDIX N (Continued)

Revised Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Attitude of Resistance to Discontinuing the Paper Bill Removed) (Continued)

Authenticity						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
AUINDSPE	0.94	0.88	0.12	0.94	0.88	0.12
AUBEST	0.94	0.88	0.12	0.94	0.88	0.13
AULEG	0.94	0.88	0.11	0.94	0.88	0.11
AUEVDISP	0.88	0.77	0.22	0.88	0.77	0.22
AUTANLK	0.83	0.69	0.32	0.83	0.69	0.32
Composite Reliability	0.96			0.96		
Variance Extracted	0.82			0.82		
Aesthetics (Form)						
AWGT*	0.82	0.67	0.34	0.81	0.66	0.34
ACOLOR	0.83	0.69	0.31	0.82	0.67	0.32
ASIZE	0.81	0.66	0.34	0.82	0.67	0.33
AFONT	0.57	0.32	0.67	--	--	--
AFEEL	0.75	0.56	0.43	--	--	--
Composite Reliability	0.87			0.86		
Variance Extracted	0.58			0.67		
Aesthetics (Function)						
AL AID	0.70	0.49	0.51	0.71	0.50	0.5
AINFPAP	0.78	0.61	0.39	0.81	0.66	0.34
ADETINF	0.67	0.45	0.56	0.73	0.53	0.47
AMAIL	0.80	0.64	0.36	--	--	--
ALOGO	0.56	0.31	0.69	--	--	--
Composite Reliability	0.83			0.79		
Variance Extracted	0.50			0.56		

*Only item that changed

APPENDIX N (Continued)

Revised Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Attitude of Resistance to Discontinuing the Paper Bill Removed) (Continued)

Reaction of Bank						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
NOCONB	0.94	0.88	0.11	0.94	0.88	0.11
NOBELFB	0.96	0.92	0.08	0.96	0.92	0.08
NOWILLB	0.90	0.81	0.19	0.9	0.81	0.19
Composite Reliability	0.95			0.95		
Variance Extracted	0.87			0.87		
Irresponsibility						
NOFINIRB	0.97	0.94	0.06	0.97	0.94	0.06
NOFINIRC	0.98	0.96	0.05	0.98	0.96	0.05
NOFINIRU	0.97	0.94	0.06	0.97	0.94	0.06
Composite Reliability	0.98			0.98		
Variance Extracted	0.94			0.94		
Aversion to Dependence						
NEPDEPC	0.96	0.92	0.07	0.96	0.92	0.07
NEPDEPU	0.98	0.96	0.05	0.98	0.96	0.05
NEPDEPB	0.96	0.92	0.08	0.96	0.92	0.05
Composite Reliability	0.98			0.98		
Variance Extracted	0.93			0.94		
Insecure						
NOINSECC	0.98	0.96	0.05	0.98	0.96	0.05
NOINSECU	0.98	0.96	0.04	0.98	0.96	0.04
NOIBSECB	0.97	0.94	0.07	0.97	0.94	0.07
Composite Reliability	0.98			0.98		
Variance Extracted	0.95			0.95		

APPENDIX N (Continued)

Revised Standardized Factor Loadings, Item Error, Composite Reliability and Average Variance Extracted (Attitude of Resistance to Discontinuing the Paper Bill Removed) (Continued)

Financial Risk Tolerance						
	Factor Loading	(Factor Loading) ²	Error	Factor Loading	(Factor Loading) ²	Error
MCC	0.82	0.67	0.32	0.83	0.69	0.31
MCWELL	0.86	0.74	0.27	0.94	0.88	0.12
MCPENIN	0.59	0.35	0.66	--	--	--
MCPENY	0.48	0.23	0.77	--	--	--
MCCASH	-0.06	0.00	1.00	--	--	--
MCSAVE	0.50	0.25	0.75	--	--	--
MCSAL	0.21	0.04	0.95	--	--	--
MCCOLL	0.57	0.32	0.67	--	--	--
MCPROUD	0.75	0.56	0.44	0.7	0.49	0.51
MCPROMT	0.57	0.32	0.67	--	--	--
MCPAR	0.5	0.25	0.75	--	--	--
Composite Reliability	0.82			0.87		
Variance Extracted	0.34			0.69		
Technical Risk Tolerance						
TCC	0.70	0.49	0.51	0.79	0.62	0.38
TPEOPLE	0.72	0.52	0.49	0.79	0.62	0.37
TOCOMP	0.66	0.44	0.56	0.64	0.41	0.59
TCONFP	0.75	0.56	0.44	--	--	--
TMISTK	0.62	0.38	0.61	--	--	--
TORFTPLC	0.73	0.53	0.47	0.71	0.50	0.49
Composite Reliability	0.85			0.82		
Variance Extracted	0.49			0.54		

APPENDIX N (Continued)

**Revised Standardized Factor Loadings, Item Error, Composite Reliability
and Average Variance Extracted (Attitude of Resistance to
Discontinuing the Paper Bill Removed) (Continued)**

Habit						
	Factor Loading	(Factor Loading)²	Error	Factor Loading	(Factor Loading)²	Error
HFREQ	0.85	0.72	0.27	0.85	0.72	0.27
HAUTO	0.82	0.67	0.33	0.82	0.67	0.33
HNODO	0.76	0.58	0.42	0.76	0.58	0.42
HLONTIM	0.76	0.58	0.42	0.76	0.58	0.42
Composite Reliability	0.88			0.88		
Variance Extracted	0.64			0.64		

APPENDIX O

Three Rival Models

Rival Model 1: Path from “Habit” to “Attitude Toward the Object” deleted
 (“Authenticity,” “Aesthetics-Form,” “Aesthetics-Function”)

Rival Model 2: Path from “Habit” to “Behaviour” deleted

Rival Model 3: “Habit” Construct Deleted

Figure 2 - Rival Model 1 (Path from Habit to Attitude Toward the Object Deleted)

χ^2 (df)=5510.44 (1488), $\chi^2/df=3.7$, RMSEA=0.056, RMSEA Confidence Interval =0.055-0.058, SRMR=0.041, CFI=0.99, NFI=0.98, NNFI=0.98

**Table 1 - Path Coefficients and Significance of the
Habit Set of Hypotheses of Rival Model 1**

H₁ Habit Set		Path Coefficient	T Value
H _{1a1}	Habit→ Authenticity	--	--
H _{1a2}	Habit→ Aesthetics-Form	--	--
H _{1a3}	Habit→ Aesthetics-Function	--	--
H _{1c}	Habit→ Behaviour of resistance to discontinuing the paper bill	0.28*	11.96
*Significant			

**Table 2a - Path Coefficients and Significance of the
Attitude Toward the Object (Authenticity) Set of Hypotheses of Rival Model 1**

H₂ – Attitude Object (Authenticity) Set		Path Coefficient	T Value
H _{2a1-4}	Authenticity→Redundancy	0.37*	2.95
H _{2a1-5}	Authenticity→Warranty	-1.42*	-3.56
H _{2a1-6}	Authenticity→Permanence	0.04	0.23
H _{2a1-7}	Authenticity→Facilitates financial work processes	0.43*	3.77
H _{2b1-8}	Authenticity→Bank Reaction	-1.35*	-3.5
H _{2b1-9}	Authenticity→Insecure	-1.52*	-3.82
H _{2b1-10}	Authenticity→Irresponsible	-1.73*	-4.20
H _{2b1-11}	Authenticity→Aversion to Dependence	-1.19*	-3.35
H _{2c1-10}	Authenticity→Financial risk tolerance	0.28	1.41
H _{2c1-11}	Authenticity→Technical risk tolerance	-1.12*	-3.44
*Significant			

Table 2b - Path Coefficients and Significance of the Attitude Toward the Object (Aesthetics-Function) Set of Hypotheses of Rival Model 1

H₂ – Attitude Object (Aesthetics-Function) Set		Path Coefficient	T Value
H _{2a3-4}	Aesthetics-Function→Redundancy	0.63*	4.51
H _{2a3-5}	Aesthetics-Function→Warranty	2.5*	5.53
H _{2a3-6}	Aesthetics-Function→Permanence	0.96*	4.85
H _{2a3-7}	Aesthetics-Function→Facilitates financial work processes	0.54*	4.30
H _{2b3-8}	Aesthetics-Function→Bank Reaction	2.40*	5.54
H _{2b3-9}	Aesthetics-Function→Insecure	2.45*	5.49
H _{2b3-10}	Aesthetics-Function→Irresponsible	2.50*	5.42
H _{2b3-11}	Aesthetics-Function→Aversion to Dependence	2.22*	5.54
H _{2c1-10}	Authenticity→Financial risk tolerance	0.28	1.41
H _{2c1-11}	Authenticity→Technical risk tolerance	-1.12*	-3.44
H _{2c2-12}	Aesthetics-Form→Financial risk tolerance	0.12	1.83
H _{2c2-13}	Aesthetics-Form→Technical risk tolerance	-0.31*	-2.89
H _{2c3-12}	Aesthetics-Function→Financial risk tolerance	-0.13	-0.6
H _{2c3-13}	Aesthetics-Function→Technical risk tolerance	1.72*	4.76
*Significant			

Table 2c - Path Coefficients and Significance of the Attitude Toward the Object (Aesthetics-Form) Set of Hypotheses of Rival Model 1

H₂ – Attitude Object (Aesthetics-Form) Set		Path Coefficient	T Value
H _{2a2-4}	Aesthetics-Form→Redundancy	-0.10*	-2.55
H _{2a2-5}	Aesthetics-Form→Warranty	-0.56*	-4.25
H _{2a2-6}	Aesthetics-Form→Permanence	-0.17*	-2.85
H _{2a2-7}	Aesthetics-Form→Facilitates financial work processes	-0.04	-1.17
H _{2b2-8}	Aesthetics-Form→Bank Reaction	-0.56*	-4.41
H _{2b2-9}	Aesthetics-Form→Insecure	-0.48*	-3.66
H _{2b2-10}	Aesthetics-Form→Irresponsible	-0.37*	-2.76
H _{2b2-11}	Aesthetics-Form→Aversion to Dependence	-0.46*	-3.98
H _{2c2-12}	Aesthetics-Form→Financial risk tolerance	0.12	1.83
H _{2c2-13}	Aesthetics-Form→Technical risk tolerance	-0.31*	-2.89
*Significant			

Table 3 - Path Coefficients and Significance of the Outcome (Normative and Self-Identity) Set of Hypotheses of Rival Model 1

H₃ – Outcome (Normative and Self-Identity) Set		Path Coefficient	T-Value
H _{3c8}	Bank reaction→Intention to resist discontinuing the paper bill	0.33	0.86
H _{3c9}	Insecure→ Intention to resist discontinuing the paper bill	0.27	1.51
H _{3c10}	Irresponsible→Intention to resist discontinuing the paper bill	0.16	1.24
H _{3c11}	Aversion to Dependence→Intention to resist discontinuing the paper bill	0.32	1.14
H _{3c12}	Financial risk tolerance→ Intention to resist discontinuing the paper bill	-0.01	-0.21
H _{3c13}	Technical risk tolerance→Intention to resist discontinuing the paper bill	0.01	0.24
*Significant			

Table 4 - Path Coefficients and Significance of the Intention-Behaviour Hypothesis of Rival Model 1

H₅ – Intention-Behaviour		Path Coefficient	T Value
H ₅	Intention to not discontinue the paper bill→Behaviour of resistance to discontinuing the paper bill	0.28*	6.15
*Significant			

**Table 5 - Path Coefficients and Significance of the
New Set of Hypotheses of Rival Model 1**

H₆ New Set		Path Coefficient	T Value
H_{6a1}	Authenticity→ Intention to resist discontinuing the paper bill	2.88*	0.98
H_{6a2}	Aesthetics-Form→ Intention to resist discontinuing the paper bill	1.25	1.16
H_{6a3}	Aesthetics-Function→ Intention to resist discontinuing the paper bill	-5.69	-1.15
H_{6b5}	Redundancy→ Intention to resist discontinuing the paper bill	0.63*	3.28
H_{6b6}	Warranty→ Intention to resist discontinuing the paper bill	0.75	1.20
H_{6b7}	Permanence→ Intention to resist discontinuing the paper bill	0.16	0.87
H_{6b8}	Facilitates Financial Work Processes→ Intention to resist discontinuing the paper bill	0.92*	7.04
*Significant			

Figure 2 - Rival Model 2 (Path from Habit to Behaviour Deleted)

χ^2 (df)=6432.94 (1492), $\chi^2/df = 4.3$, RMSEA=0.062, RMSEA Confidence Interval =0.061-0.064, SRMR= 0.089, CFI=0.99, NFI=0.98, NNFI=0.98

**Table 1 - Path Coefficients and Significance of the
Habit Set of Hypotheses of Rival Model 2**

H₁ - Habit Set		Path Coefficient	T Value
H _{1a1}	Habit→ Authenticity	0.78*	20.08
H _{1a2}	Habit→Aesthetics-Form	0.19*	4.81
H _{1a3}	Habit→Aesthetics-Function	0.65*	11.12
H _{1c}	Habit→Behaviour of resistance to discontinuing the paper bill	--	--
*Significant			

**Table 2a - Path Coefficients and Significance of the
Attitude-Object (Authenticity) Set of Hypotheses of Rival Model 2**

H₂ – Attitude-Object (Authenticity) Set		Path Coefficient	T Value
H _{2a1-4}	Authenticity→Redundancy	0.78*	26.94
H _{2a1-5}	Authenticity→Warranty	0.36*	11.98
H _{2a1-6}	Authenticity→Permanence	0.68*	19.79
H _{2a1-7}	Authenticity→Facilitates financial work processes	0.76*	11.98
H _{2b1-8}	Authenticity→Bank Reaction	0.38*	12.79
H _{2b1-9}	Authenticity→Insecure	0.25*	7.76
H _{2b1-10}	Authenticity→Irresponsible	0.08*	2.27
H _{2b1-11}	Authenticity→Aversion to Dependence	0.38*	13.13
H _{2c1-10}	Authenticity→Financial risk tolerance	0.17*	3.88
H _{2c1-11}	Authenticity→Technical risk tolerance	0.09*	2.08
*Significant			

**Table 2b - Path Coefficients and Significance of the
Attitude-Object (Aesthetics-Function) Set of Hypotheses of Rival Model 2**

H₂ – Attitude Object (Aesthetics-Function) Set		Path Coefficient	T Value
H _{2a3-4}	Aesthetics-Function→Redundancy	0.27*	9.80
H _{2a3-5}	Aesthetics-Function→Warranty	0.72*	12.68
H _{2a3-6}	Aesthetics-Function→Permanence	0.37*	10.22
H _{2a3-7}	Aesthetics-Function→Facilitates financial work processes	0.26*	9.50
H _{2b3-8}	Aesthetics-Function→Bank Reaction	0.68*	12.90
H _{2b3-9}	Aesthetics-Function→Insecure	0.67*	12.55
H _{2b3-10}	Aesthetics-Function→Irresponsible	0.66*	12.00
H _{2b3-11}	Aesthetics-Function→Aversion to Dependence	0.66*	13.04
H _{2c3-12}	Aesthetics-Function→Financial risk tolerance	-0.01	-0.22
H _{2c3-13}	Aesthetics-Function→Technical risk tolerance	0.05*	9.09
*Significant			

**Table 2c - Path Coefficients and Significance of the
Attitude-Object (Aesthetics-Form) Set of Hypotheses of Rival Model 2**

H₂ – Attitude Object (Aesthetics-Form) Set		Path Coefficient	T Value
H _{2a2-4}	Aesthetics-Form→Redundancy	0.03	1.50
H _{2a2-5}	Aesthetics-Form→Warranty	-0.04	-1.65
H _{2a2-6}	Aesthetics-Form→Permanence	0.04	1.62
H _{2a2-7}	Aesthetics-Form→Facilitates financial work processes	0.07*	3.84
H _{2b2-8}	Aesthetics-Form→Bank Reaction	-0.05*	-2.34
H _{2b2-9}	Aesthetics-Form→Insecure	0.04	1.53
H _{2b2-10}	Aesthetics-Form→Irresponsible	0.16*	5.23
H _{2b2-11}	Aesthetics-Form→Aversion to Dependence	0.00	0.05
H _{2c2-12}	Aesthetics-Form→Financial risk tolerance	0.09*	2.22
H _{2c2-13}	Aesthetics-Form→Technical risk tolerance	0.05	1.4
*Significant			

Table 3 - Path Coefficients and Significance of the Outcome (Normative and Self-Identity) Set of Hypotheses of Rival Model 2

H₃ – Outcome (Normative and Self-Identity) Set		Path Coefficient	T Value
H _{3c8}	Bank reaction→Intention to resist discontinuing the paper bill	-0.01	-0.09
H _{3c9}	Insecure→ Intention to resist discontinuing the paper bill	0.11	1.96
H _{3c10}	Irresponsible→Intention to resist discontinuing the paper bill	0.04	0.97
H _{3c11}	Aversion to Dependence→Intention to resist discontinuing the paper bill	0.08	0.86
H _{3c12}	Financial risk tolerance→ Intention to resist discontinuing the paper bill	-0.01	-0.49
H _{3c13}	Technical risk tolerance→Intention to resist discontinuing the paper bill	-0.03	-0.04
*Significant			

Table 4 - Path Coefficients and Significance of the Intention-Behaviour Hypothesis of Rival Model 2

H₅ – Intention-Behaviour		Path Coefficient	T Value
H ₅	Intention to not discontinue the paper bill→Behaviour of resistance to discontinuing the paper bill	0.67*	15.43
*Significant			

**Table 5 - Path Coefficients and Significance of the
New Set of Hypotheses of Rival Model 2**

H₆ - New Set		Path Coefficient	T Value
H_{6a1}	Authenticity→ Intention to resist discontinuing the paper bill	-0.54*	-2.06
H_{6a2}	Aesthetics-Form→ Intention to resist discontinuing the paper bill	0.04	1.33
H_{6a3}	Aesthetics-Function→ Intention to resist discontinuing the paper bill	-0.49	-1.43
H_{6b5}	Redundancy→ Intention to resist discontinuing the paper bill	0.53*	4.19
H_{6b6}	Warranty→ Intention to resist discontinuing the paper bill	0.19	1.14
H_{6b7}	Permanence→ Intention to resist discontinuing the paper bill	0.05	0.49
H_{6b8}	Facilitates Financial Work Processes→ Intention to resist discontinuing the paper bill	0.83*	9.00
*Significant			

**Table 1 - Path Coefficients and Significance of the
Habit Set of Hypotheses of Rival Model 3**

H₁ Habit Set		Path Coefficient	T Value
H _{1a1}	Habit→ Authenticity	--	--
H _{1a2}	Habit→ Aesthetics-Form	--	--
H _{1a3}	Habit→ Aesthetics-Function	--	--
H _{1c}	Habit→ Behaviour of resistance to discontinuing the paper bill	--	--
*Significant			

**Table 2 - Path Coefficients and Significance of the
Attitude-Object (Authenticity) Set of Hypotheses of Rival Model 3**

H₂ – Attitude Object (Authenticity) Set		Path Coefficient	T Value
H _{2a1-4}	Authenticity→Redundancy	0.38*	3.33
H _{2a1-5}	Authenticity→Warranty	-1.22*	-3.67
H _{2a1-6}	Authenticity→Permanence	0.07	0.42
H _{2a1-7}	Authenticity→Facilitates financial work processes	0.43*	4.10
H _{2b1-8}	Authenticity→Bank Reaction	-1.15*	-3.57
H _{2b1-9}	Authenticity→Insecure	-1.31*	-3.95
H _{2b1-10}	Authenticity→Irresponsible	-1.51*	-4.39
H _{2b1-11}	Authenticity→Aversion to Dependence	-1.02*	-3.41
H _{2c1-10}	Authenticity→Financial risk tolerance	0.28	1.56
H _{2c1-11}	Authenticity→Technical risk tolerance	-0.98*	-3.50
*Significant			

**Table 2 - Path Coefficients and Significance of the
Attitude-Object (Aesthetics-Function) Set of Hypotheses of Rival Model 3**

H₂ – Attitude Object (Aesthetics-Function) Set		Path Coefficient	T Value
H _{2a3-4}	Aesthetics-Function→Redundancy	0.62*	4.87
H _{2a3-5}	Aesthetics-Function→Warranty	2.28*	6.06
H _{2a3-6}	Aesthetics-Function→Permanence	0.93*	5.22
H _{2a3-7}	Aesthetics-Function→Facilitates financial work processes	0.54*	4.67
H _{2b3-8}	Aesthetics-Function→Bank Reaction	-2.19*	6.00
H _{2b3-9}	Aesthetics-Function→Insecure	2.23*	5.94
H _{2b3-10}	Aesthetics-Function→Irresponsible	2.21*	5.85
H _{2b3-11}	Aesthetics-Function→Aversion to Dependence	2.03*	6.00
H _{2c3-12}	Aesthetics-Function→Financial risk tolerance	-0.13	-0.65
H _{2c3-13}	Aesthetics-Function→Technical risk tolerance	1.58	4.99
*Significant			

**Table 2 - Path Coefficients and Significance of the
Attitude-Object (Aesthetics-Form) Set of Hypotheses of Rival Model 3**

H₂ – Attitude Object (Aesthetics-Form) Set		Path Coefficient	T Value
H _{2a2-4}	Aesthetics-Form→Redundancy	-0.10*	-2.62
H _{2a2-5}	Aesthetics-Form→Warranty	-0.51*	-4.50
H _{2a2-6}	Aesthetics-Form→Permanence	-0.16*	-2.91
H _{2a2-7}	Aesthetics-Form→Facilitates financial work processes	-0.04	-1.21
H _{2b2-8}	Aesthetics-Form→Bank Reaction	-0.51*	-4.65
H _{2b2-9}	Aesthetics-Form→Insecure	-0.43*	-3.79
H _{2b2-10}	Aesthetics-Form→Irresponsible	-0.32*	-2.76
H _{2b2-11}	Aesthetics-Form→Aversion to Dependence	-0.43*	-4.16
H _{2c2-12}	Aesthetics-Form→Financial risk tolerance	0.12	1.91
H _{2c2-13}	Aesthetics-Form→Technical risk tolerance	-0.28*	2.90
*Significant			

Table 3 - Path Coefficients and Significance of the Outcome (Normative and Self-Identity) Set of Hypotheses for Rival Model 3

H₃ – Outcome (Normative and Self-Identity) Set		Path Coefficient	T Value
H _{3c8}	Bank reaction→Intention to resist discontinuing the paper bill	0.18	0.52
H _{3c9}	Insecure→ Intention to resist discontinuing the paper bill	0.20	1.26
H _{3c10}	Irresponsible→Intention to resist discontinuing the paper bill	0.10	0.94
H _{3c11}	Aversion to Dependence→Intention to resist discontinuing the paper bill	0.21	0.83
H _{3c12}	Financial risk tolerance→ Intention to resist discontinuing the paper bill	-0.01	-0.02
H _{3e13}	Technical risk tolerance→Intention to resist discontinuing the paper bill	0.00	-0.08
*Significant			

Table 4- Path Coefficients and Significance of the Intention-Behaviour Hypothesis for Rival Model 3

H₅ – Intention-Behaviour		Path Coefficient	T Value
H ₅	Intention to not discontinue the paper bill→Behaviour of resistance to discontinuing the paper bill	0.69*	14.26
*Significant			

**Table 5 - Path Coefficients and Significance of the
New Set of Hypotheses for Rival Model 3**

H₆ New Set		Path Coefficient	T Value
H_{6a1}	Authenticity→ Intention to resist discontinuing the paper bill	1.53	0.73
H_{6a2}	Aesthetics-Form→ Intention to resist discontinuing the paper bill	0.77	0.92
H_{6a3}	Aesthetics-Function→ Intention to resist discontinuing the paper bill	-3.46	-0.89
H_{6b5}	Redundancy→ Intention to resist discontinuing the paper bill	0.58*	3.31
H_{6b6}	Warranty→ Intention to resist discontinuing the paper bill	0.50	0.90
H_{6b7}	Permanence→ Intention to resist discontinuing the paper bill	0.10	0.62
H_{6b8}	Facilitates Financial Work Processes→ Intention to resist discontinuing the paper bill	0.87*	6.95
*Significant			