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THE IMPACT ON SWITCHING INTENTION OF E-TRADING SYSTEMS FOR THE SECURITIES INDUSTRY

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ABSTRACT

It is an important issue focused on how to improve e-service quality to gain competitive advantage among diverse securities industries. The investors have the positive perceived value, e-satisfaction and e-trust through the improvement of e-service quality for online trading systems to create an unique online service environment of the securities industry in order to reduce switching intentions of them. This study explored the impacts among e-service quality, perceived value, e-satisfaction and e-trust, and switching intention in Internet trading systems of the securities industry. The object of this study was online traders who had used Internet trading systems of the securities industry in Taiwan. The collected data were analyzed by using statistical methods. The findings of this study indicate that there were significantly positive correlations among e-service quality, perceived value, e-satisfaction and e-trust, and all of which had a negative correlation with switching intention; e-service quality had a significantly positive and direct impact on perceived value and e-satisfaction, but there was no significantly positive impact on e-trust. E-service quality affected switching intention through two intervening variables as perceived value and e-satisfaction. These results also can provide insights into the effect on switching intention and thus offer improvable and strategic suggestions for the securities industry to provide better e-trading systems to the investors.

JEL: M1, M15

KEYWORDS: E-service Quality, Perceived Value, E-satisfaction, E-trust, Switching Intention

INTRODUCTION

With the increasing maturity and prevalence of the Internet, e-commerce has become a new channel for transaction. Many foreign and domestic securities companies have therefore established online transaction platforms, such as online stock brokerage and e-bank, to expand their business. Compared with manual trading of securities, online trading of securities is simpler, faster and less likely to cause errors. Investors are enabled to obtain the latest information on certain stocks from the Internet at anytime and anywhere. Moreover, they can also get an instant report when they trade any stock (Cheng, 1999; Chiang, 2000). The statistics provided by Taiwan Stock Exchange Corporation (2012) show that the number of new accounts for online stock trading (including telephone trading) increased from 1,022 in July 1997 to 401,887 in November 2012, with an increase in percentage of value of stocks traded online to total trading value from 0.01% to 27.31%. By December 2013, 63 stock brokers in Taiwan have started to offer online trading services. The increasing prevalence of online trading services has also intensified the competition between brokerage firms and posed a serious threat to those that still rely on manual trading. In this highly competitive financial market, electronic service quality (e-service quality) has virtually become the primary area of competition among securities brokers and also one of the keys to their survival. E-service quality had been recognized as an important factor affecting the success or failure of e-commerce (Yang, 2001).

Therefore, how to enhance e-service quality to retain existing customers and attract new ones has emerged as an important goal for all businesses. Lee *et al.* (2007) mentioned that business managers and researchers paid particularly more attention to perceived value because perceived value affected not only customers' perceptions during purchase but also their post-purchase satisfaction, repurchase and recommendation.

Ruiz *et al.* (2008) pointed out that most businesses with a competitive advantage in this extensively competitive market were characterized by a greater focus on consumer perceived value. Consumers perceive higher value of a product or service when they think they can get more benefits from the product or service than from its alternatives.

For securities brokers, providing online services and quality expected by investors can result in higher investor satisfaction. The empirical evidence in Yen (2009) suggested that securities brokers with limited resources had to constantly improve factors with lower investor satisfaction to deliver better services to investors and increase their satisfaction. By doing so, they can not only retain existing investors but also have opportunity to attract new investors and turn all the investors into their loyal customers. Customer satisfaction is always one of the goals that businesses should endeavor to achieve. A 2011 report on satisfaction with online banking (ForeSee Results, 2011) showed that most highly satisfied online banking customers were profitable businesses. This report also revealed that satisfaction surveys could help businesses predict the needs and behavior of online banking customers. Friedman *et al.* (2000) had empirically confirmed that online trust (e-trust) had a significant effect on customer intention to disclose private information and make financial deals on the website.

If customers have little trust in online transactions, online services providers may be confronted with serious obstruction in their development towards greater market penetration. Hence, customers' e-trust plays an essential role in e-commerce. Their trust in the service system also affects their online behavior and attitude. So far, many customers still refuse to use e-commerce for a variety of reasons, most of which are associated with a lack of safety and trust in the virtual environment. How to develop customers' trust in e-commerce (e-trust) is therefore of high importance. Under consideration of resource limitations, most businesses view customer creation and retention a cornerstone to long-term sustainability. One of their main goals is to lower customers' switching intention and minimize customer loss. According to Keaveney and Parthasarathy (2001), customer switching was especially serious in service industries, such as insurance, banking, public services, medical and insurance and mobile communication. Ganesh *et al.* (2000) stated that customers' repurchase or switching intention was directly affected by their post-purchase evaluation of a product or service. Despite the abundance of surveys and studies on online transactions, most extant research is focused on online shopping or key factors of online trading, and little research has addressed the needs, satisfaction, value perception and e-trust of online traders of securities. Therefore, this study surveyed the various dimensions of online trading among securities traders, including electronic service quality (e-service quality), perceived value, electronic satisfaction (e-satisfaction), electronic trust (e-trust) and switching intention, and explored the relations of these dimensions with switching intention. The remainder of this paper as follows. We align our work with the relevant literature in section 2. The data and methodology and results are illustrated in sections 3 and 4, respectively. Finally, concluding comments are drawn in Section 5.

LITERATURE REVIEW

The relevant literatures about E-trading of Securities(Online Trading of Securities), Electronic Service Quality (E-service Quality), Perceived Value, Electronic Satisfaction (E-satisfaction), Electronic Trust (E-trust), and Switching Intention are presented in literature review section.

E-Trading of Securities (Online Trading of Securities)

Taiwan Stock Exchange Corporation began to use the fully automated trading system for all listed stocks and launched an online supervisory system to safeguard the order of the stock market on August 2, 1993. Maggi and Nijkamp (1992) pointed out that conventional industries were not likely to achieve a rapid growth with virtually no limit as the Internet industry had achieved. The Internet is a modern trend. It saves the cost of labor and increases the value of time. Its economic benefits are recognized across all industries. In recent years, the financial industries (including the banking and securities industry) have also progressively transformed to use online trading mechanisms in place of manual trading operations. Among all the online financial services, most Taiwanese consumers were most familiar with online trading of

securities mainly because of the higher information value, convenience value, service value and utilitarian value of this service (Wu, 2004).

Electronic Service Quality (E-Service Quality)

Parasuraman *et al.* (2005) defined electronic service quality (e-service quality) as the degree to which a web site facilitated efficient and effective shopping, purchasing and delivery. This definition covers service quality in the pre-purchase stage (e.g., perceived ease of use of the web site, clarity of product and order information and protection of personal data) and the post-purchase stage (e.g., product delivery, customer support and responsiveness to customers). Liao *et al.* (2011) proposed that e-service quality was the experience of service providers and customers that arised mainly through electronic channels and without human intervention. Parasuraman *et al.* (2005) also constructed a quality scale called E-S-QUAL to measure e-service quality. This scale consists of four dimensions, including system availability, efficiency, fulfillment and privacy. Yaya *et al.* (2011) used E-S-QUAL without the fulfillment dimension to measure the e-service quality of online banking systems. Liong *et al.* (2011) probed into satisfaction of Google users and confirmed that e-service quality was positively related to e-satisfaction.

Perceived Value

The transaction utility theory propounded by Thaler (1985) could be extended to explain customer perceived value. When purchasing a product, customers usually assess the value of the product based on their perceptions. Their purchase intention increases when they perceive higher value of the product. Breuer (2006) identified two forms of value. One was the benefits that customers got after using the product, and the other was the relative benefit that they brought to the company. Turel *et al.* (2007) suggested that perceived value was measured along four dimensions, including quality value, emotional value, monetary value and social value. In a study of the relationship between product and perceived value, Lee *et al.* (2010) proposed six dimensions of perceived value, including social approval, price/quality, craftsmanship, aesthetic beauty, and product influence. Chen and Chen (2010) examined the relationship among experience quality, perceived value, customer satisfaction and behavioral intention in the tourism industry. Their findings showed that perceived value had a direct and positive effect on customer satisfaction.

Electronic Satisfaction (E-Satisfaction)

Szymanski and Hise (2000) defined e-satisfaction as customers' overall feeling of their online shopping experience. According to Anderson and Srinivasan (2003), e-satisfaction was the contentment of the customer with respect to his or her prior purchasing experience with a given e-commerce firm (Fahim *et al.*, 2010). Yen (2008) evaluated user satisfaction with web-based self-services in three dimensions, including system, information and service. Lee *et al.* (2009) mentioned that e-satisfaction was the satisfaction of the customer with his or her prior purchasing experience or behavior with a web site. In a study of online consumers of apparels, Lin (2009) found that delivery efficiency and web site design had a significant impact on e-satisfaction. The findings in Ghane *et al.* (2011) also indicated that service quality, e-satisfaction and e-trust had a relatively stronger and more direct association with e-loyalty.

Electronic Trust (E-Trust)

Electronic trust (e-trust) could be defined as an attitude of confident expectation in an online situation of risk that one's vulnerabilities will not be exploited (Corritore *et al.*, 2003; Horppu *et al.* 2008). Tsai (2011) concluded after a review of literature related to online stores that e-trust was customers' belief in the reliability of the product, information and services provided by the web site. Dabholkar and Sheng (2012) found that consumers had more satisfaction, greater trust, and higher purchase intentions by using recommendation agents (RAs) of online shopping. Shankar *et al.* (2002) proposed four dimensions of e-trust, including reliability, emotional comfort, competence and benevolence. Chiu *et al.* (2010) showed four items of bidding justice which affected consumers' e-trust. They mentioned that consumers with e-trust would consider the product, information and service provided by the seller as reliable. Chen and Liu (2010)

integrated service quality and TAM perspectives to explore factors affecting e-trust and purchase intention. Their findings suggested that higher e-trust led to higher purchase intention.

Switching Intention

Keaveney (1995) defined switching intention as one's attitude toward replacing the current brand with another. Shen and Li (2010) pointed out that switching intention was the intention to betray or exit an existing relationship. It depended primarily on customers' decision to stop buying or receiving the primary services from a service provider. Chih *et al.* (2012) showed that initial (discrepancy between service failure expectation and service performance) and recovery (discrepancy between recovery expectation and recovery performance) disconfirmations could affect switching intentions through satisfaction. Kim *et al.* (2006) proposed four items of consumers' intention for email switching. They suggested that intention for email switching depended on consumers' decision to terminate or cancel their subscription to the primary service of a company and use the alternative service of another company. Shen and Li (2010) explored the antecedents to switching and their relationship with customer loyalty. They found a negative relation between switching intention and customer loyalty.

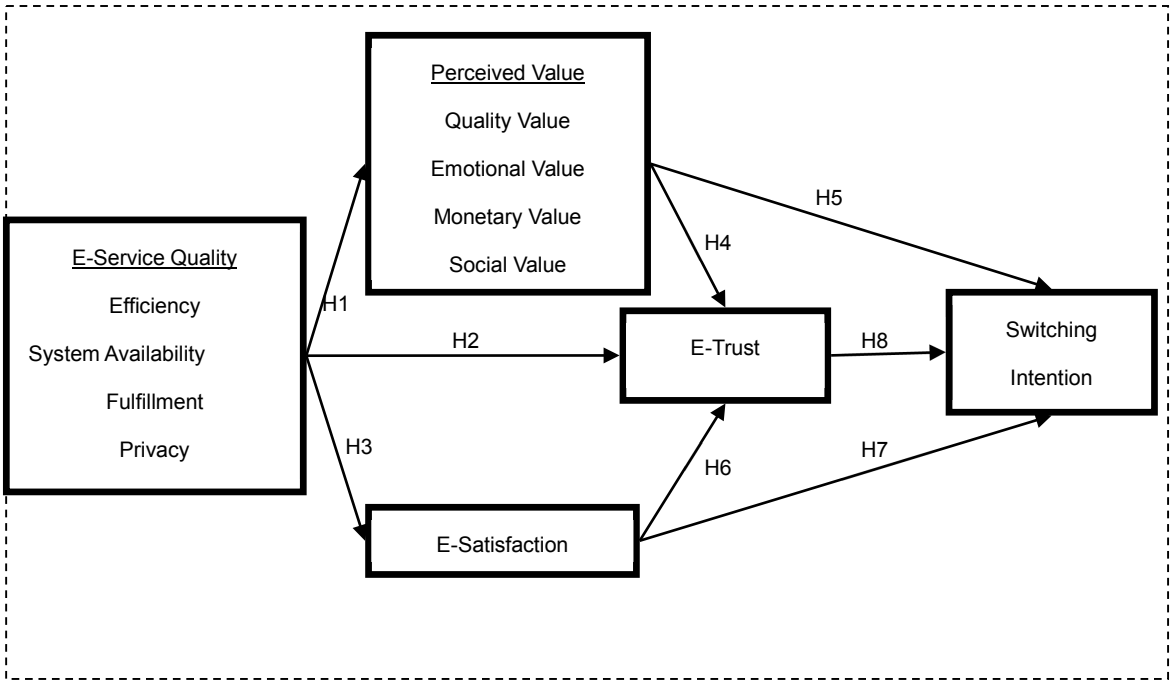
DATA AND METHODOLOGY

This study investigated the online securities trading systems in Taiwan from customer perspective. Based on previous literature, this study attempted to explore the effects among e-service quality, perceived value, e-satisfaction, e-trust and switching intention in the context of online securities trading. In this study, e-service quality was measured using E-S-QUAL introduced by Parasuraman *et al.* (2005). This scale comprises four dimensions, including efficiency, system availability, fulfillment and privacy. Perceived value was measured using four dimensions including quality value, emotional value, monetary value, and social value proposed by Turel *et al*. (2007). E-satisfaction was measured using the satisfaction of the consumers with purchase experience and behavior on the Web site developed by Lee *et al.* (2009). E-trust was measured using the correctness and reliability of products, information and services provided by online seller on customer's trust proposed by Chiu *et al.* (2010). Finally, switching intention was measured using consumers' decision to terminate or cancel their subscription to the primary service of a company and use the alternative service of another company developed by Kim *et al.* (2006). The research structure was developed based on the variables discussed in literature review. In this structure, e-service quality was set as an antecedent variable. In addition to the effects of perceived value, e-satisfaction and e-trust on switching intention, this study would also explore the differences in each of these variables across demographic variables. The research framework is as illustrated Figure 1.

The definition and measure of the variables in this study referred to the relevant literature reviews. The research hypotheses were developed by the objectives of this study, literature reviews, and research framework. They are described as follows.

*E-service Quality is Related to Perceived Value***:** Fassnacht and Köse (2007) stated that the perceived value of an online service increased with its e-service quality. Kuo *et al.* (2009) obtained a positive relationship between perceived value and e-service quality in a study of mobile value-added services. Lai and Chen (2010) explored factors affecting people's use of mass transit systems. Their empirical findings showed that service quality had a significant and positive effect on perceived value, overall satisfaction and behavioral intention. From the above-mentioned findings, it can be inferred that e-service quality affects perceived value positively. Thus, this study proposes the following hypothesis:

Figure 1: Research Framework



This figure shows the research framework of the effects among e-service quality, perceived value, e-satisfaction and e-trust, and switching intention.

H1: E-Service Quality Is Significantly and Positively Related to Perceived Value

E-Service Quality Is Related To E-Trust **:** Gefen (2002) pointed out in a research of customer loyalty in the e-commerce context that the reliability, responsiveness and assurance dimensions of e-service quality had a positive effect on consumers' e-trust. Gefen *et al.* (2003) argued that e-service quality affected consumers' trust in a web site, suggesting that online stores with better e-service quality could win more consumer trust. Kim *et al.* (2009) further showed that safety and fulfillment of e-service quality were determinants of e-trust.

H2: E-service quality is significantly and positively related to e-trust.

*E-service Quality is Related to E-satisfaction***:** Zeithamal *et al.* (2002) highlighted the importance of e-service quality for consumers, suggesting that e-service quality was a determinant of consumers' repurchase intention. E-service quality affected satisfaction, repurchase intention and actual purchase. Rodgers *et al.* (2005) investigated service quality in the online environment. Their findings warranted the positive association between e-service quality and customer satisfaction. Liong *et al.*'s (2011) research of user satisfaction with Google services also confirmed that e-service quality was significantly related to e-satisfaction.

H3: E-service quality is significantly and positively related to e-satisfaction.

*Perceived Value is Related to E-trust***:** In a study of relationship quality and perceived value, Moliner *et al.* (2007) found that perceived value was an antecedent to trust and had a positive effect on trust. Kim *et al*. (2008) investigated the relationship between perceived value, satisfaction and trust in a context of online CRM. Their empirical findings showed that perceived value had a positive effect on trust.

H4: Perceived value is significantly and positively related to e-trust.

Perceived Value is Related to Switching Intention: Hess *et al.* (2003) and Bell *et al.* (2005) had mentioned that higher perceived value helped reinforce the relationship between customers and suppliers. Therefore, higher perceived value could lead to higher customer loyalty and lower switching intention. Chiu (2009) explored the relationship between perceived value and switching intention in the securities industry. Her findings revealed a negative relationship between perceived value and switching intention. In other words, investors had lower intention to switch to other securities brokers when they perceived higher value of the services provided by the current one.

H5: Perceived value is significantly and negatively related to switching intention.

E-satisfaction is Related to E-trust: Flavián *et al.* (2006) proposed that e-satisfaction influenced e-trust, and e-trust depends on the company's ability to satisfy customer needs. Lin (2009) investigated the antecedents and outcomes of e-satisfaction and e-trust. His findings showed that e-satisfaction had a significant effect on e-trust, and the effects of e-satisfaction and e-trust on e-loyalty were statistically significant.

H6: E-satisfaction is significantly and positively related to e-trust.

*E-satisfaction is Related to Switching Intention***:** Zeithaml et al. (1996) pointed out that any decline in perceived service quality would result in a decline in satisfaction and an increase in customers' switching intention. Athanassopoulos *et al.* (2001) found a negative relationship between customer satisfaction and switching intention in the banking industry. Huang (2005) studied customer switching intention from the perspective of relationship commitment. Her findings indicated that satisfaction had a negative effect on customer switching intention.

H7: E-satisfaction is significantly and negatively related to switching intention.

*E-trust is Related to Switching Intention***:** Ranaweera and Prabhu (2003) indicated that satisfaction and trust had a strong negative relation to switching intention. Yen (2009) probed into the factors affecting industrial customers' intention to switch suppliers. His findings also revealed a negative relationship between trust and switching intention. Kuo (2004) had the same finding in a research of consumers' switching intention and behavior.

H8: E-trust is significantly and negatively related to switching intention.

Sampling Design and Survey: Gorsuch (1983) argued that the number of question items and the sample size should be in a ratio of 1:5 and preferably in a ratio of 1:10, and the sample size should be greater than at least 100. The number of question items in this research is 51 (excluding demographic variables), thus the optimal sample size is 510. In fact, we distributed a total of 625 copies of the questionnaire across the nation. Based on the statistics of population by region released by Directorate-General of Budget, Accounting, and Statistics, Executive Yuan in December 2013, we calculated the minimum size of samples from each region and excluded duplicate responses or responses with incomplete answers. All the acceptable responses were coded and filed. At last, 515 acceptable responses were obtained, 234 of which came from northern Taiwan, 133 from central Taiwan and 148 from southern Taiwan. The acceptable response rate was 82.4%. The data were collected for the period 5/1/2014 until 9/26/2014.

RESULTS

The data of this study were collected in the research survey based on the total of 515 usable questionnaires to describe and analyze by using the SPSS statistical package and linear structural relationships AMOS.

Reliability Analysis

In this study, internal consistency of the questionnaire was tested using Cronbach's α and correlation

coefficient. The higher the two coefficients, the more consistent and reliable the measurement results. Before proceeding to the subsequent analysis, we first analyzed the overall reliability of the questionnaire. The result showed a Cronbach's α coefficient of 0.967, which met the 0.7 requirement recommended by Devellis (1991). In other words, the questionnaire was developed with high reliability.

One-Sample T Test Analysis

One-sample t test analysis was used in this study. The null hypothesis of H_0 : $\mu \leqq 3$ and the alternative hypothesis of H_1 : $\mu > 3$ were used to test and show there were almost significantly higher agreement (satisfaction) levels on e-service quality, perceived value, e-satisfaction, e-trust, and switching intention.

Factor Analysis of E-Service Quality

Based on Parasuraman *et al.* (2005) scale, we performed principal component analysis to extract three dimensions of e-service quality, respectively named "efficiency and privacy", "system availability" and "fulfillment". After factor rotation, these three dimensions had an eigenvalue of 10.038, 2.810 and 1.378 respectively. All of these values were greater than 1, indicating the classification was appropriate and meaningful. Besides, the cumulated variance explained was 64.662%. This value was greater than the standard level of 60%, indicating that the extracted dimensions were reliable. All the factor loadings were also greater than the standard level of 0.4, meaning that the items were relevant to the dimensions. The three dimensions are explained as follows: Dimension 1: Items in this dimension mainly describe how customers can easily and quickly access the web site and how the web site can protect customers' personal data. We named dimension as "efficiency and privacy". Dimension 2: Items in this dimension measure that the web site has sufficient technical abilities to ensure smooth and zero-fault trading of securities. We named this dimension as "system availability". Dimension 3: Items in this dimension describe how the web site can correctly process orders and deliver information or product to customers on time. This dimension was therefore named "fulfillment".

Factor Analysis of Perceived Value

Based on the dimensions proposed by Turel *et al.* (2007), we performed principal component analysis to extract three dimensions of perceived value, respectively named "monetary and emotional value", "social value" and "quality value". After factor rotation, these three dimensions had an eigenvalue of 7.557, 2.188 and 1.183 respectively. All of these values were greater than 1, indicating the classification was appropriate and meaningful. Besides, the cumulated variance explained was 64.279%. This value was greater than the standard level of 60%, indicating that the extracted dimensions were reliable. All the factor loadings were also greater than the standard level of 0.4, meaning that the items were relevant to the dimensions. The three dimensions are explained as follows: Dimension 1: Items in this dimension describe that customers can get enjoyment and pleasure while using the web site and perceive the value of the service or product they pay for. This dimension was named "monetary and emotional value". Dimension 2: Items in this dimension describe that customers think that the overall value of the product or service is acceptable and recognized by the society. We named this dimension as "social value". Dimension 3: Items in this dimension are mainly about customers' judgment of the consistency of products or services offered on the web site. We named this dimension as "quality value".

Factor Analysis of E-satisfaction: Based on the dimension proposed by Lee *et al.* (2009), we performed principal component analysis to extract one dimension of e-satisfaction, named "e-satisfaction". After factor rotation, the one dimension had an eigenvalue of 3.711. The value was greater than 1, indicating the classification was appropriate and meaningful. Besides, the cumulated variance explained was 74.217%. This value was greater than the standard level of 60%, indicating that the extracted dimension was reliable. The factor loadings were also greater than the standard level of 0.4, meaning that the items were relevant to the dimension. The one dimension is explained as follows: Dimension 1: Items in this dimension mainly measure customers' satisfaction with their online trading experiences to understand their overall perception of the web site's online services. This dimension was named "e-satisfaction".

Factor Analysis of E-trust: Based on the dimension proposed by Chiu *et al.* (2010), we performed principal component analysis to extract one dimension of e-trust, named "e-trust". After factor rotation, the one dimension had an eigenvalue of 2.891. The value was greater than 1, indicating the classification was appropriate and meaningful. Besides, the cumulated variance explained was 72.282%. This value was greater than the standard level of 60%, indicating that the extracted dimension was reliable. The factor loadings were also greater than the standard level of 0.4, meaning that the items were relevant to the dimension. The one dimension is explained as follows: Dimension 1: Items in this dimension mainly describe that customers consider all the information, products and services provided by the online retailer as correct and reliable. This dimension was therefore named "e-trust".

Factor Analysis of Switching Intention: Based on the dimension proposed by Kim *et al.* (2006), we performed principal component analysis to extract one dimension of switching intention, named "switching intention". After factor rotation, the one dimension had an eigenvalue of 2.347. The value was greater than 1, indicating the classification was appropriate and meaningful. Besides, the cumulated variance explained was 78.225%. This value was greater than the standard level of 60%, indicating that the extracted dimension was reliable. The factor loadings were also greater than the standard level of 0.4, meaning that the items were relevant to the dimension. The one dimension is explained as follows: Dimension 1: Items in this dimension mainly describe that customers are planning or have decided to terminate or cancel subscription to the primary service of a company and subscribe the service provided by another company. This dimension was named "switching intention".

Structural Equation Modeling Analysis: This study tested whether there were significantly causal relationships between the factors or not, and how many differences between the data of the theoretical model and the actual observation were through structural equation modeling AMOS 17.0 package. Assessment indices and results of the goodness-of-fit of the overall model are shown in Table 1. The analysis for direct effect shows that e-service quality had a direct effect of 0.986 and 0.459 on perceived value and e-satisfaction respectively, indicating that e-service quality had a direct and positive impact on perceived value and e-satisfaction; perceived value had a direct effect of 0.480 on e-trust, meaning that perceived value would directly and positively affect e-trust; e-satisfaction had a direct effect of 0.600 on e-trust, meaning that e-satisfaction was positively and directly related to e-trust; e-satisfaction had a direct effect of -0.145 on switching intention, suggesting that e-satisfaction had a direct but negative effect on switching intention; e-trust had a direct effect of -0.273 on switching intention, indicating that e-trust and switching intention were also directly but negatively related. The analysis for indirect effect shows that e-service quality affected e-trust through two paths, with an indirect effect of 0.459×0.600 (e-satisfaction as the mediator)+0.986×0.480 (perceived value as the mediator)=0.749; perceived value affected switching intention through e-trust, with an indirect effect of 0.480×(-0.273)= -0.131; e-satisfaction affected switching intention through e-trust, with an indirect effect of 0.600×(-0.273)= -0.164.

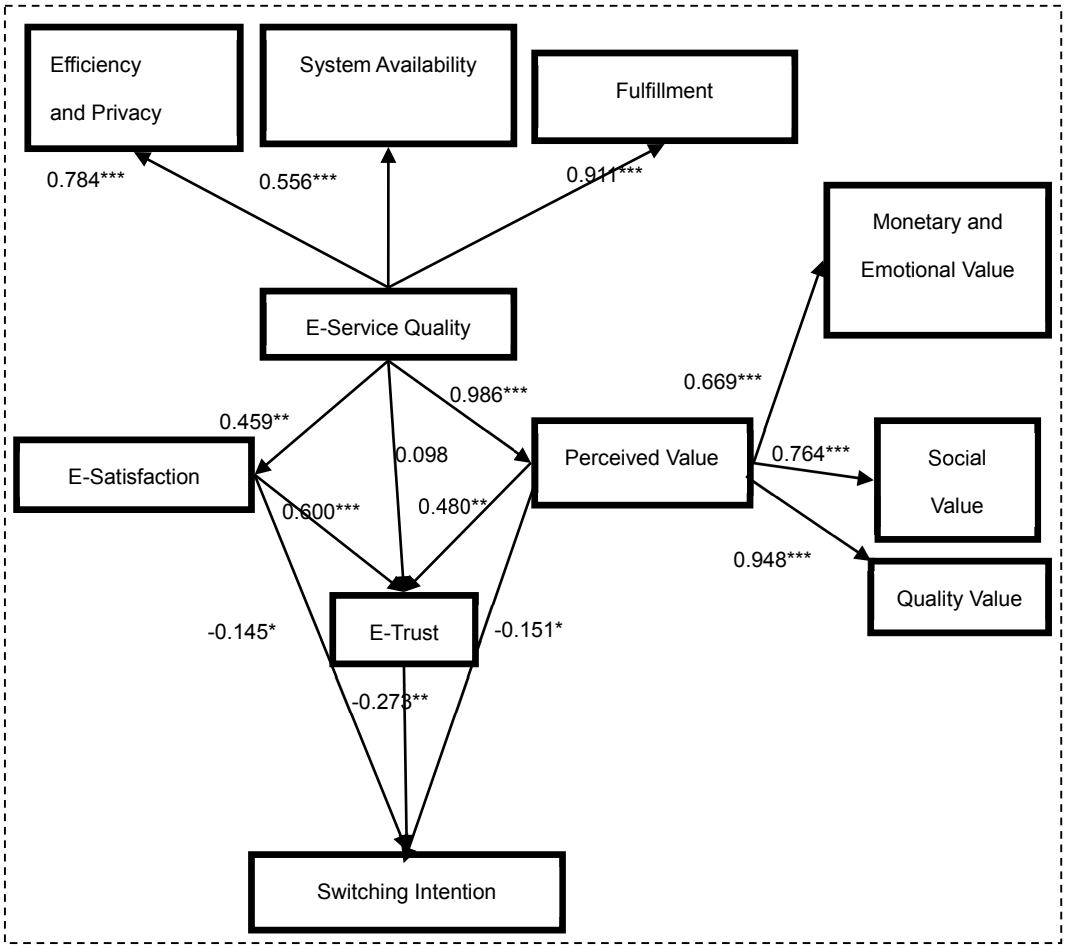
The analysis for total effect of switching intention shows that the key factor of the most significantly negative effect was e-satisfaction, with a total effect of -0.309. The second significantly negative effect was e-trust, with a total effect of -0.273. The final significantly negative effect was perceived value, with a total effect of -0.183. The results of effect analysis are shown in Figure 2. According to the above analytical results, e-service quality could significantly and positively affect perceived value and e-satisfaction. Perceived value and e-satisfaction could significantly and positively affect e-trust. Moreover, e-satisfaction and e-trust could significantly and negatively affect switching intention. Therefore, the results of this study supported hypotheses 1, 3, 4, 6, 7, and 8, but hypotheses 2 and 5 were not supported.

Table 1: Assessment Indices and Results of the Goodness-of-Fit of the Overall Model

Index	Test Statistics	Index Values	Analytical Values	Test Results
Absolute goodness-of-fit index	χ^2/df	<3	2.958	Accept
	GFI	>0.9	0.910	Accept
	AGFI	>0.9	0.902	Accept
	RMR	<0.05	0.045	Accept
	RMSEA	<0.05	0.042	Accept
Relative goodness-of-fit index	NFI	>0.9	0.924	Accept
	RFI	>0.9	0.911	Accept
	IFI	>0.9	0.948	Accept
	TLI	>0.9	0.940	Accept
	CFI	>0.9	0.949	Accept
Parsimony goodness of fit index	PGFI	>0.5	0.676	Accept
	PNFI	>0.5	0.758	Accept

This table shows the three kinds of goodness-of-fit index, test statistics, Index values, Analytical values, and Test results.

Figure 2: The Effect Analysis of the Goodness-of-Fit Structure of the Overall Model



*This figure shows the regression estimates of the equation. **indicates significance at the 1 percent level, ***indicates significance at the 0.1 percent level.*

CONCLUDING COMMENTS

The objective of this study is to examine the impacts among e-service quality, perceived value, e-satisfaction and e-trust, and switching intention in Internet trading systems of the securities industry. We conclude results of this research and propose implications for the management practice and directions for future researchers, in hope of providing some substantive assistance to securities brokers in understanding

the behavior of online traders and factors affecting their switching intention. The statistical methods including reliability analysis, one-sample *t* test analysis, factor analysis, and structural equation modeling analysis are used to test research hypotheses. The findings of this study show that there were significantly positive effects among e-service quality, perceived value, e-satisfaction, and e-trust, but a significantly negative impact on switching intention. Perceived value was positively related to e-satisfaction e-trust, but it was negatively related to switching intention. E-satisfaction was positively related to e-trust, but it was negatively related to switching intention. E-trust was negatively related to switching intention.

It is not only good for the securities industry to retain the old customers, but also it can develop new market opportunities to enhance their business performance. Moreover, the securities industry also should pay attention to e-service quality and perceived value and reduce users' switching intention through improvement of e-satisfaction and e-trust. As shown in this study, e-service quality had a significant positive and direct effect on perceived value and e-satisfaction and was also positively related to e-trust. Hence, securities brokers can improve their e-service quality based on the three dimensions extracted in this study. In the aspect of efficiency and privacy, they can pay more attention to the accessibility of the system and security of personal data. In the aspect of system availability, their web site administrator should endeavor to ensure that all the financial products shown in the system are correct and valid, allowing users to make online deals with no error. Finally, in the aspect of fulfillment, the web site administrator should ensure effectiveness and accuracy of transmission for each deal. Improvement in these aspects can lead to higher user satisfaction, which in turn can lower users' switching intention.

In addition, securities brokers can refer to a variety of assessments of e-service quality conducted by market survey companies or leading magazines. From the assessment results, they can learn some innovative services of other broker companies and also have a direction on how to improve their own services. Besides, due to the fact that perceived value is positively and directly related to e-trust and has a negative effect on switching intention, we suggest that securities brokers improve the perceived value of their services in the three dimensions extracted in this study. In the aspect of emotional and monetary value, they can add background music to their web site or work with other brokers to find a fair and commonly acceptable amount of transaction fees to maximize user satisfaction. In the aspect of social value, they can use more propaganda to promote the advantages of online trading.

Finally, in the aspect of quality value, they can reinforce their security mechanisms and offer reliable information to win user trust. Improvement in these three aspects can increase the perceived value of online trading, motivating users to use and rely on the various services of their online trading system. Any increase in users' perceived value and e-trust can lead to a decrease in their switching intention. On the other hand, securities brokers can also adopt CRM mechanisms to increase the perceived value of their online services. They can collect customer data for analysis and use the results for predicting customer needs and developing marketing strategies. This study has a limitation in collecting the data of the questionnaires by the convenient sampling method because of limited time, cost, and labor. Although sampling and empirical methods of this research strive to be perfect, but there are still some improvements for extending or more widely explored studies at the future research directions for subsequent researchers. Future research may use other e-service quality scale or expand the scope of the study to other financial institutions (such as banking and insurance industry, etc.) to explore whether there are significant differences and effects or not between perceived value, e-satisfaction, e-trust, and switching intentions for the different e-service quality scale and various types of financial institutions. Other dimensions such as corporate image, brand and product involvement can be explored to analyze whether they would significantly affect e-service quality, perceived value, e-satisfaction, e-trust, and switching intention or not for securities trading systems in the future research model.

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