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An Assessment of Safaricard Systems as a Risk Management Practice and its Effect on Financial Performance of Kenya Wildlife Services

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ABSTRACT: The study analyzed Safari Card system as a revenue risk management practice on financial performance by Kenya Wildlife Services. The target population of the study was 1,286 employees in the National Parks where Safari card System is used to collect the Parks entry charges. The study used systematic random sampling procedure to arrive at the 296 sample size. The study collected both primary and secondary data which was processed to answer the objectives of the study. A descriptive survey research design was used to obtain a description of a particular perception about a situation, phenomena or variable and views were taken to represent those of the entire population. Data was analyzed using descriptive statistics and presented using frequency tables and charts. The relationship between Safari Card as a risk management practice and financial performance was tested using a regression model. The introduction of Safari Card as a transactional risk reduction system made KWS to increase its liquidity as a measure of financial performance, although the system did not improve working capital. Second, the introduction of Safari Card cash handling system positively improved KWS liquidity. Third, the introduction of Safari Card Customers Relations risk management system did not positively influence KWS liquidity, working capital and use of its assets optimally to generate the required short term liquidity. Fourth, the introduction of Safari Card financial information risk management system did not positively influence KWS liquidity, working capital and use of its assets optimally to generate the required short term liquidity.

KEYWORDS: Electronic Revenue System, Financial Information Management, Financial Performance and Financial Risk Management

1 INTRODUCTION

The main aim of KWS is the conservation of wildlife and historical sites for purposes of biodiversity and also conservation of history. The conservation of wildlife, both plants, animals is done in National Parks, Game Reserves and other private Sanctuaries. In order to sustain its programs, KWS charges different fees to tourist who may want to visit the parks where these conservations are done. KWS has evolved through several phases in the methods of revenue collection; from paper ticketing, Smart Card System to the current Safari Card System. KWS introduced Smart Card system as the main payment systems for park entry by visitors and their vehicles. This system was introduced as a strict revenue collection system that was meant to control revenue losses incurred before (KWS, 2011). The main reason of strict revenue collection is to sustain the KWS programs and operations which are financed directly from such collections. It has been noted over years that the organization has suffered many revenue loss. Safari Card was introduced as operational risk management practice by KWS with the main objective of controlling the revenue losses incurred before. Since the introduction of Safari Card in the year 2000, it is not clear whether the system has achieved its objectives and in turn brought effect on KWS financial performance which is the research gap that this study hopes to abridge.

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2 LITERATURE

The study adopts Unified Theory of Acceptance and Use of Technology (UTAUT) aims to explain user intentions to use an IS and subsequent usage behavior. The theory holds that four key constructs (performance expectancy, effort expectancy, social influence, and facilitating conditions) are direct determinants of usage intention and behavior (Venkatesh et. al., 2003). Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key constructs on usage intention and behavior (Venkatesh et. al., 2003). The theory was developed through a review and consolidation of the constructs of eight models that earlier research had employed to explain information system usage behavior (theory of reasoned action, technology acceptance model, motivational model, theory of planned behavior, a combined theory of planned behavior/technology acceptance model, model of PC utilization, innovation diffusion theory, and social cognitive theory).

2.1 ELECTRONIC CARD SYSTEM

The use of Information Technologies (IT) in the day-by-day operations is growing dramatically. Tourism is one of the most affected sectors by the use of IT. Nowadays, it is possible to get information easily about a certain destination, look for flights reaching any place, book a hotel room or even get museum or park tickets, for example. Besides, all these actions can be performed in a notably comfortable way: they can be done at home and there are not temporal restrictions.

The ticket is a contract between a user and a service provider. If the user demonstrates his ownership of the ticket, he obtains the right to use the service under its terms and conditions (Fujimura and Nakajima, 1998) (e.g., ticket validity time). Commonly, the ticket validation is required in order to use the service. Depending on the conditions of the ticket, it can be validated once, a predefined several times or indefinitely until a deadline.

The ticket must include elements to assure the system's security and the users' privacy. The requirements related to security and privacy can vary among different applications of e-tickets. In some cases, security would be critical, such as ticket falsification on air travel. In others, privacy requirements, as the anonymity of the users, are mandatory.

The e-ticketing system is based on the use of Smart-Cards, so the Smart-Card issuer is also included in the system. The system proposed in Jorns et al. (2007) includes user localization, as well as information related to this location. In order to give this service, preserving user anonymity, the network provider is added as a trusted participant. Other systems also consider the possibility to pay for the e-ticket, so that the payment service provider, the bank and the credit card issuer are also participants involved in the system.

In recent years, justification of the use of smart card fare collection systems has been debated in several countries. The major investment required for implementation, along with the technical difficulties that arose in the early installations, have caused hesitation among promoters. However, these days, the technology has improved and the benefits have become evident. On the positive side, authors report long-term cost reduction, flexibility in pricing options, potential information sharing, and better revenue management. On the negative side, the question of the high implementation costs, technological complexity, and slow social acceptance are seen as possible obstacles. In most cases, external funding seems to be necessary to initiate large implementation projects (Iseki et al., 2007). However, there are many organizational patterns that can be used to acquire, operate, and maintain smart card payment systems (Transit Cooperative Research Program, 2006): the private corporation (as in Hong Kong), public single operator ownership (as in London, UK), a joint power authority (as in Singapore), or a public–private partnership (as in Scandinavia). Although the smart card is being used more and more by public transit agencies, this technology is not new.

Possible application areas for microprocessor cards include identification, access control systems for restricted areas and computers, secure data storage, electronic signatures and electronic purses, as well as multifunctional cards incorporating several applications in a single card. Modern smart-card operating systems also allow new applications to be loaded into a card after it has already been issued to the user, without trading off the security of the various applications. This new flexibility opens up completely new application areas for smart cards. For example, personal security modules are essential if Internet commerce and payments are to be made trustworthy. Such security modules could store personal keys and execute high-performance cryptographic algorithms. These tasks can also be performed in an elegant manner by a microprocessor with a cryptographic coprocessor. Specifications for secure Internet applications using smart cards are recently being developed throughout the world. It wouldn't be unrealistic to say; within a few years, we can expect to see every PC equipped with a smart card interface (Hayat, Rössler et al. 2006).

Smart cards, unlike magnetic stripe cards, can carry all necessary functions and information on the card. Therefore, they do not require access to remote databases at the time of the transaction. Compared to magnetic stripe cards, smart cards

have many advantages: - Smart cards provided with Chips with more than 1 MB of memory are currently available, and this figure will multiply with each new chip generation, while magnetic cards can hold only around 1000 bits. This allows the card-transaction participants (Card Company, acquiring bank, issuing bank, retailers, etc.) to store a lot of additional information on the card (Tam and Ho 2007); Data on a smart card can be protected against unauthorized viewing. As a result of this, confidential data (e.g., PINs and passwords) can be stored on a smart card. That is, merchants do not have to go online every time to authenticate a transaction.(Shen, Lin et al. 2003; Tam and Ho 2007). A single smart card can house multiple applications. Just one card can be used as your license, passport, credit card, ATM card, ID card, etc.(Domingo-Ferrer, Posegga et al. 2007; Liu, Yang et al. 2007); The life span of a smart card is longer.(Rankl and Effing 2003) Smart cards cannot be easily replicated and are, as a general rule, much more secure than magnetic stripe cards.(Shen, Lin et al. 2003)

The factors that affect the spread of innovations are described in several well- known theories. Perry declares that academics in the diffusion theory field 'define diffusion as the process through which some innovation is communicated within a social system.' Perry points up 'time' as an important factor in the rate of diffusion. He also emphasizes the role of individuals and their social influence in the diffusion process.

Innovation Diffusion Theory (IDT), which was defined by Everett Rogers in a book called Diffusion of Innovations first in 1962, is a model that explains the process by which innovations in technology are adopted by users. It is the study of how, why, and at what rate new ideas and technology spread through cultures. Rogers defines an innovation as “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” and Diffusion is defined as “the process by which an innovation is communicated through certain channels over time among the members of a social system”.

2.2 RISK MANAGEMENT PRACTICES

A company can be exposed to different types of risks; market, operation, business, finance, credit and reputation risks, this study will adopt operation risks which are the main problem that has been affecting revenue at the KWS. There is a growing recognition that a major source of earnings volatility is not due to financial risk. In fact, it is not related to the way a firm finances its business, but rather to the way a firm operates its business, and is called operational risk (King, 2002). Operational risk is concerned with the adverse deviation of a firm’s performance, due to the way in which the firm is operated, as opposed to how the firm is financed. It is defined as a measure of the link between a firm’s business activities and the variation in its business results (King, 2002).

Operational risk helps management to determine what factors affect earnings, in terms of the overall operation of a company. Factors that cause changes in earnings should be investigated, in order to determine the overall effect. Management must understand the cause of the risk, so as to effectively manage the risk and obtain the desired balance between risk and return. There are many benefits to managing risk and maintaining earnings (King, 2002): Avoid unexpected losses and improve operational efficiency. If management understands operational risk, this will assist in understanding the operational activity of the firm and, thereby, being able to effectively strategize operational risk. This allows management to avoid large losses; Efficient use of capital. Capital is budgeted based on future earnings capital usage helps to optimize the risk return trade-off for capital allocation decisions; Satisfy shareholders. Risk measurement can help influence shareholder views, and improve areas that are needed to avoid shareholder surprises; Comply with regulations. Operational risk management is a board level responsibility which can be effectively maintained through the implementation of corporate governance principles, and the use of operational controls; Most operational risks become potential losses for a company, because they, basically, expose the company to market, credit and liquidity risk.

In its most simple description, cash management represents “the management of cash inflows and outflows of the firm, as well as the stock of cash on hand” (Fabozzi & Petersen, 2003). It consists of taking the necessary actions to maintain adequate levels of cash to meet operational and capital requirements and to obtain the maximum yield on short-term investments of pooled, idle cash.

Cash management can be categorized from different aspects of the firm. From the aspect of financial management, cash management is a part of short-term financial management, also called working capital management. Namely, financial management encompasses all financial decisions made within a company, whose ultimate goal is to maximize shareholder value (Pinches, 1994, p. 4). It is comprised of long- and short term financial management. Long term financial management deals with long term investments, as well as long term financing of the company on the capital markets (Pinches, 1994, p. 635). Short term financial management (also referred to as liquidity management or working capital management) deals with decisions that have a financial impact on the company’s operations in the period of less than one year. It aims at constructing

such a combination of short term assets (cash, marketable securities, accounts receivable and inventories) and short term liabilities (short term funds for financing short term assets) that would maximize the shareholder value (Shapiro, 2002).

Cash management can be seen as part of risk management, more specifically as a part of managing liquidity, interest rate and foreign currency risk. Liquidity risk is the risk that a company will not be able to timely acquire the funds necessary to meet its obligations as they come due, either by increasing its liabilities or by converting assets without incurring considerable losses (Lam, 2003, p. 182). As one of the main goals of cash management is ensuring that the company has enough cash to perform its everyday operations and to cover unpredicted outflows, one can easily categorize it as a measure for liquidity risk management.

Depending on how many responsibilities it consists of, cash management can be divided into: treasury management (or basic cash management) and advanced cash management. A study of cash management practices in a sample of Spanish firms done by San José et al. (2008, p. 192) confirm previous findings that treasury management in a narrow sense or basic cash management, which encompasses the fundamental functions of cash management, has evolved into treasury management in a broad sense, or advanced cash management. According to San José et al. (2008) basic cash management involves developing and undertaking administrative measures aimed at establishing the optimal level of cash that would allow the company to make and receive payments in such a way that the normal operations of the company are preserved. Such are: short term cash flow forecasting, setting up an optimum cash level, optimizing the liquidity of the company, monitoring and optimizing the cash cycle, monitoring the banking positions at value date, and finally, controlling the banking positions on a daily basis.

The cash management techniques employed for controlling the cash inflows and outflows are grouped in different ways by different authors: speeding the inflows and controlling the outflows; improving cash flow forecasts, synchronizing cash inflows and outflows, using float, accelerating collections, getting available funds to where they are needed and controlling disbursements (Brigham, 1999); forecasting cash flows, accelerating cash receipts, slowing down disbursements, effective investing of cash surpluses, economical financing of cash shortages (Mramor, 1993).

When looking into the cash management techniques, one has to be aware of the differences that exist between the ones that are used in Europe and the ones used in the United States. The differences stem from the use of different payment instruments. Namely, in the United States the majority of all payments, in terms of volume, especially those involving retail transactions, is conducted through the use of paper based instruments, particularly cheques (Committee on Payment and Settlement Systems, 2003). In Europe on the other hand, electronic payments are the predominant means of payment, especially direct debits, credit transfers and card payments (ECB, 2008). In paper based systems the float arises as a key concept. Float represents “the length of time between when a cheque is written and when the recipient receives the funds and can draw up on them” (Pinches, 199). The delays in payment settlement caused by float come from the fact that it takes time for the cheque to arrive at the receiving company through the mail, it takes time to process the cheque in the company and finally to clear the cheque through the banking system (Brigham & Daves, 2004). Within the electronic payment systems, funds are transferred in “real time”, meaning without any waiting period. That is why the concept of float is not applicable on the territory of Europe. In the US, the cashmanagement techniques mostly focus on reducing the float in receipts, by speeding up cheque collections, and extending the float in disbursements, by slowing down the collection of cheques a company writes (Brigham & Daves, 2004). In Europe this translates as speeding up the collection of accounts receivable and slowing down the payment of accounts payable.

Financial risk management has received increased attention over the past years. The reason for this is that financial risks, though they are not a core competency of non-financial firms, also influence their business operations to a large extend. Financial risks can be of different forms. On the one hand there are external financial risks depending on changes on financial markets. On the other hand there are internal financial risks, where the company itself is the source of the risks (Eichhorn, 2004).

Exchange risk occurs when a company is involved in international business and the cash in or outflows are in a foreign exchange rate. As this rate is not fixed and cannot be fully anticipated a possible change in a foreign exchange rate leads to the risk of changes in the amount of a payable / receivable and by that a change in the amount of money the company has to pay / will receive. This risk is measured by the concept of transaction exposure (Armeanu & Bãlu, 2007). Furthermore economic exposure can be included in the evaluation of exchange rate risk. This includes changes in the quantity of future sales due to changes in the exchange rate and therefore relative competitiveness of the company (Nassauer & Pausenberger, 2000). However, the prediction of this sensitivity is difficult and hardly measurable and thus the company cannot manage this risk actively. Most firms therefore concentrate on transaction exposure and by that on the price change and not the quantity change caused by the exchange rate volatility (Smithson, Smith & Wilford, 1995).

Reduced volatility in cash flows or earnings and prevention of losses allow better planning of liquidity needs. This can avoid shortcuts of available funds and consumption of equity (Eichhorn, 2004). However, in order to maintain financially liquid and avoid end of period losses, it needs to be analysed which the maximum tolerated loss is. The focus of the risk management should therefore be in correspondence with the actual financial situation of the company. Then, by managing, among others, internal and external financial risks, also the liquidity risk and solvency risk are taken care of. Financing risk, which needs to be managed directly, mainly depends on a mismatch between the duration of assets and their financing. The company should therefore try to match the two durations in order to avoid problems with and high costs of follow-up loans. Furthermore this reduces the risk of having more debt than needed after the asset's lifetime and by that it saves interest costs (Vickery, 2006).

External financial risks depend on changes on the financial markets. One possibility to secure against price or exchange rate volatilities would be to buy or sell the amount, which is needed or will be received in the future, already today. However the organization of the transactions requires administrative work.. Furthermore this is sometimes not possible as the commodities cannot be stored or keeping them causes high costs. Foreign funds or debt causes work and costs in similar ways. Finally, the possibility to secure the interest rate exposure or change the conditions of the contract is often limited. This is because the specifics of debt contracts to a large extend depend on the credibility of the company and are not flexible (Brünger, 2008)

2.3 REVENUE MANAGEMENT

Revenue management (RM), or yield management, is an accepted, essential strategy to maximize revenue for many capacity-limited service industries (Chiang et al., 2007). RM is a demand-based pricing strategy to control for optimal inventory levels and to forecast real-time demand (Choi and Mattila, 2006). Revenue management (RM) manages customer demand for a company's products and services, and incorporates those techniques and decisions based on knowledge derived from interfacing with current and potential customers to grow revenue through pricing and volume. RM requires a focused financial analysis to assess its ability to enhance operating profit and monitor its success in doing so.

A company's ability to increase revenue through effectively managed customer relationships is deemed to be vital in overcoming the uncertain economic outlook worldwide. However, in hospitality and tourism organizations such as airlines, convention centers and hotels, where revenue management is widely practiced, companies may encounter difficulties in accommodating both customer relationship management and revenue management practices. This may be because the former stresses the importance of profitable return from well-managed customer relationships, whereas the latter emphasizes revenue maximization predominately through effective management of perishable inventory.

The effect of revenue management on customer relationships has drawn hospitality and tourism researchers' attention from both operations management and marketing perspectives in recent years. Revenue management studies carried out in the hospitality industry have not only endeavored to harmonize the two practices by identifying areas of customer conflict (Mathies and Gudergan, 2007), but have also recommended a range of functional marketing strategies to reduce these conflicts. Unlike CRM practitioners, whose main priorities are to maintain and develop profitable customer relationships, revenue management users aim to maximize revenue and ultimately profit through improving sales (Anderson et. al, 2010) by increasing operating efficiency and effective management of three main areas: pricing, inventory control and customer mix.

Using revenue management may give a company financial lift by maximizing revenue through selling their fixed asset (capacity), but concerns regarding its effects on customer relationships have been cited by academics as well as by practicing managers. This is considered to be an under-researched area; Wirtz et al. (2003) appropriately pointed out that 'the customer seems to have been relatively forgotten in this [revenue management] stream of research'. Findings from existing revenue management studies suggest that there are a number of causes for potential customer conflicts. The first of these relates to customer perceptions towards the 'fairness' of revenue management practices (Heo and Lee, 2011). Kimes (1994) states that customers may perceive revenue management practice to be unfair if there is a lack of information on transactions and no rationalized pricing decisions are provided, potentially alienating customers. A second cause for conflict lies in the application of different pricing strategies such as those that are demand-oriented (Kimes and Wirtz, 2002), which often leads to unwelcome price fluctuation, especially during peak seasons, and could result in mistrust arising between the customers and the company (McMahon-Beattie et al., 2002). Third, conflict can arise from the use of various allocation and availability inventory control restrictions (Wirtz et al., 2003), such as limited allocation for certain rate categories and availability control restrictions that tend to link to length-of-stay requirements, which are in the best interests of the

company but not the customers; hence researchers 'concerns over customers' acceptance towards revenue management practices and its negative effects on customer satisfaction.

2.4 FINANCIAL PERFORMANCE INDICATORS

Evaluating firm performance using financial ratios has been a traditional yet powerful tool for decision-makers, including business analysts, creditors, investors, and financial managers. Rather than employing the total amounts observed on financial statements, these analyses were conducted using a number of financial ratios to obtain meaningful results. Ratio analysis can help stakeholders analyze the financial health of a company. Using these financial ratios, comparisons can be made across companies within an industry, between industries, or within a firm itself. Such a tool can also be used to compare the relative performance of different size companies.

Accounting and finance text books generally organize financial ratios into classes including liquidity, profitability, long-term solvency, and asset utilization or turnover ratios. Liquidity ratios evaluate the ability of a company to pay a short-term debt, whereas long-term solvency ratios investigate how risky an investment in the firm could be for creditors. Profitability ratios examine the profit-generating ability of a firm based on sales, equity, and assets. Asset utilization or turnover ratios measure how successfully the company generates revenues through utilizing assets, collecting receivables, and selling its inventories.

Use of financial ratios to assess the firm performance is not new. A simple literature search can find literally thousands of publications on this topic. The underlying studies often differentiate themselves from the rest by developing and using different independent variables (financial ratios) and/or employing different statistical or machine learning based analysis techniques. Financial ratios, which are calculated by using variables commonly found on financial statements, can provide the following benefits (Ross, Westerfield, & Jordan, 2003): Measuring the performance of managers for the purpose of rewards, measuring the performance of departments within multi-level companies, projecting the future by supplying historical information to existing or potential investors, providing information to creditors and suppliers, evaluating competitive positions of rivals and evaluating the financial performance of acquisitions.

Other than the benefits provided above, financial ratios are also used for the purpose of predicting future performance. For example, they are used as inputs for empirical studies or are used to develop models to predict financial distress or failures. In fact, a vast majority of the recent studies focused on analyzing and potentially predicting bankruptcy as a means to identify characteristics (in term of financial ratios) of good or bad-performing firms and their potential values (Kumar & Ravi, 2007).

CONCEPTUALIZATION

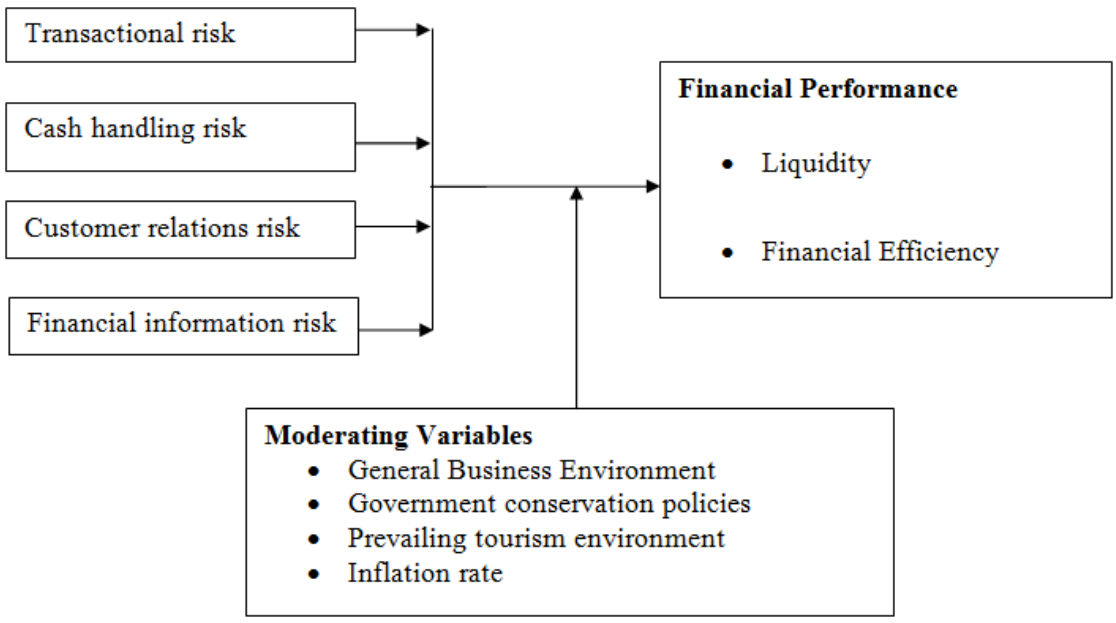

Figure 2.1: Effect of use of Safari Card on Financial Performance

The independent variables of the study are; transactional risk, cash handling risk, customers' relations management risk and financial information management risk. The dependent variable is financial performance measured in terms of; liquidity and financial efficiency (this is because KWS is not for profit organization and therefore other measures like profitability and solvency may not be relevant). The moderating variable are; the general business environment, government conservation policy, prevailing tourism environment and inflation. Effective use of Safiri smart card was meant to reduce transact risks, cash handling risks, customer relations management risks and financial information management risks as requirement towards an increased financial management, keeping the general business environment, government conservation policy, prevailing tourism environment and inflation constant.

3 METHODS

The study used a descriptive survey research design. The target population for the study was 1,286 staff members working in the National Parks where Safaricard system is used as the Parks entry charges system. The study used systematic random sampling techniques on the population of the National Parks using the Safaricard system. We used data entry forms a structured questionnaire to collect both secondary and primary information about the risk management practices and the financial performance of KWS. The relationship between Safari Card as a risk management practice and financial performance was tested using Pearson Correlation.

4 RESULTS

4.1 EFFECT OF SAFARI CARD TRANSACTIONAL RISKS MANAGEMENT ON FINANCIAL PERFORMANCE

Table 1: Safari Card Transactional Risks Management

Response	N	Min.	Max.	Mean	Std. Dev.
The system is operationalized	283	2	5	3	0.9
The system captures risk events	283	1	5	3	1.1
The system records transactional risk	283	1	5	3	1.3
The system quantify transactional risks	283	1	5	3	1.3
The system report transactional risk	283	1	5	3	1.3
The system define transactional risks	283	1	5	2	1.4
The system communicate action	283	1	5	2	1.5
The system gives signals of occurrence	283	1	5	3	1.5

The study established that the respondents were not sure about the following features of Safari Card System; that the system was already fully operationalized, that it captures risk occurrence, by keeping records of transactions, quantifying transactional risks, reports transactional risk and automatically gives signal of occurrence of transactional risk. This was evident by the mean of 3 which represented Not Sure in the Likert Scale. The study also established that the respondents disagreed on the existence of the following features of the system; that the system can define all transactional risks and communicate appropriate actions online evident by the mean of 2 which according to Likert Scale represented disagree.

This finding therefore showed that the Safari Card System used by KWS to manage revenue risks was not able to define all transactional risks and communicate appropriate actions online. The employees were also not sure of the ability of the system to; be fully operationalized, captures risk occurrence, by keeping records of transactions, quantify and report transactional risks, reports transactional risk and automatically gives signal of occurrence.

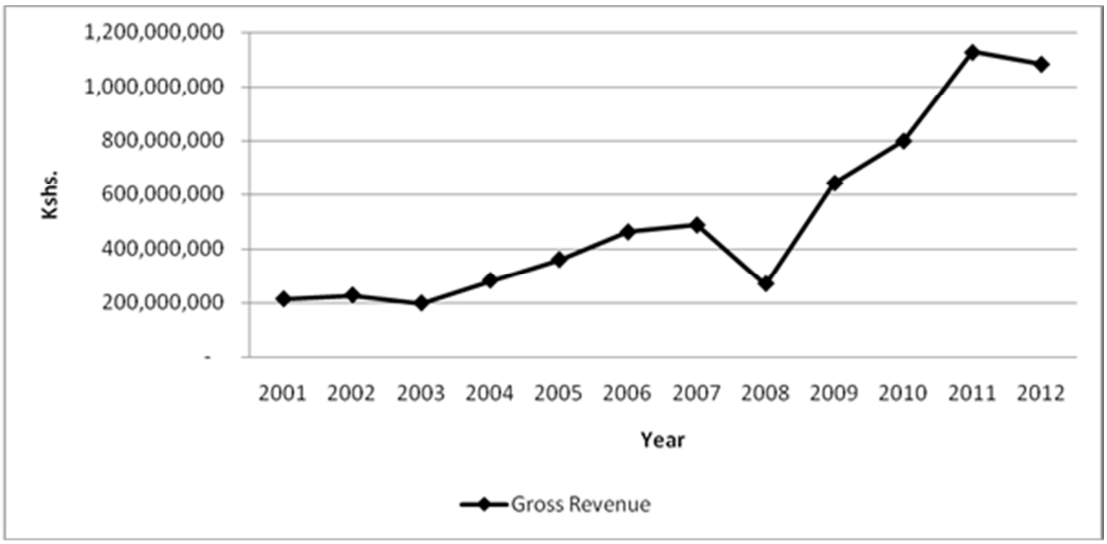

Figure 2: KWS Revenue Collection Trends (2001-2012)

Based on the revenue secondary data collected by the study, the revenue collection of KWS was low between 2001 – 2007 and sank further in 2008. This scenario indicated that there was a problem with revenue collection which required an immediate attention. This situation forced the Conservation to come up with a solution which can reverse the poor revenue collection trend. Electronic Payment Smart Card System was introduced in 2000 but did not bear any fruits as far as reduction of revenue risk was concern before 2009 when more risks mitigations of smart card were enhanced. The revenue collection started taking a positive turn by improved gradient shown in figure 2 above. Safari Card System was introduced in 2010 to replace smart card with an aim of increasing revenue collection by sealing all possible revenue leakages which even improved revenue collection further with an indication drop in the year 2012. The study is interested in analyzing the financial statements further to establish whether the changes had an effect in KWS liquidity and efficiency as indicators of financial performance.

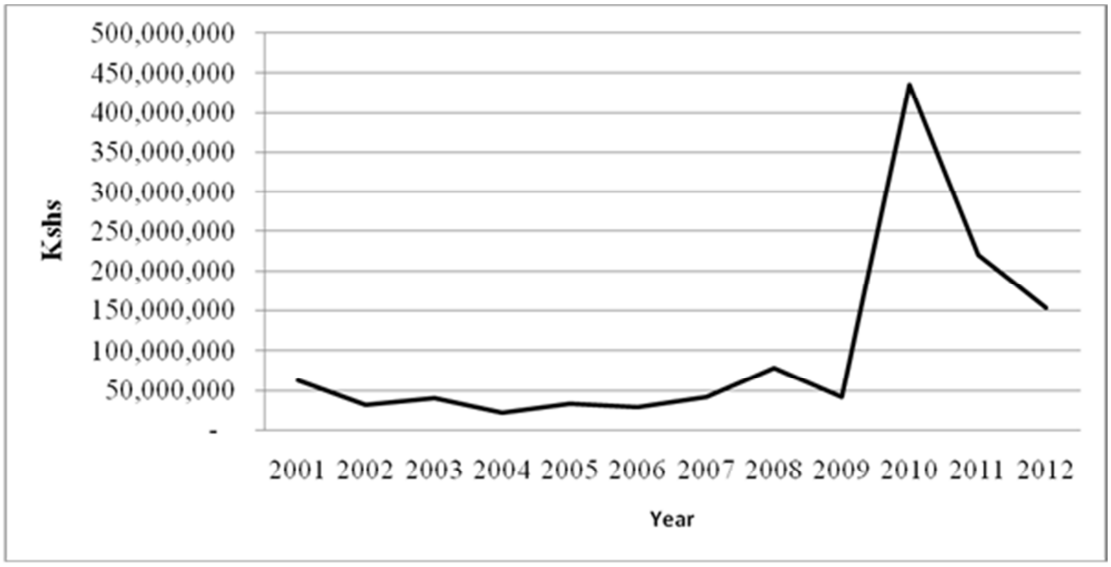

Figure 3: KWS Working Capital (2001-2012)

Working capital was used to measure KWS ability to meet its short-term obligations. The study established that before the introduction of Safari Card in 2010, working capital was generally below Kshs. 100,000,000 showing that although KWS working capital was positive, its ability to meet its short term obligations was too low, a case which could cause liquidity panic in the organization. When Safari Card was introduced, the working capital was above Kshs 400,000,000 indicating high ability to meet its obligation as per when they were dues but declined to Kshs. 150,000,000 in the year 2012.

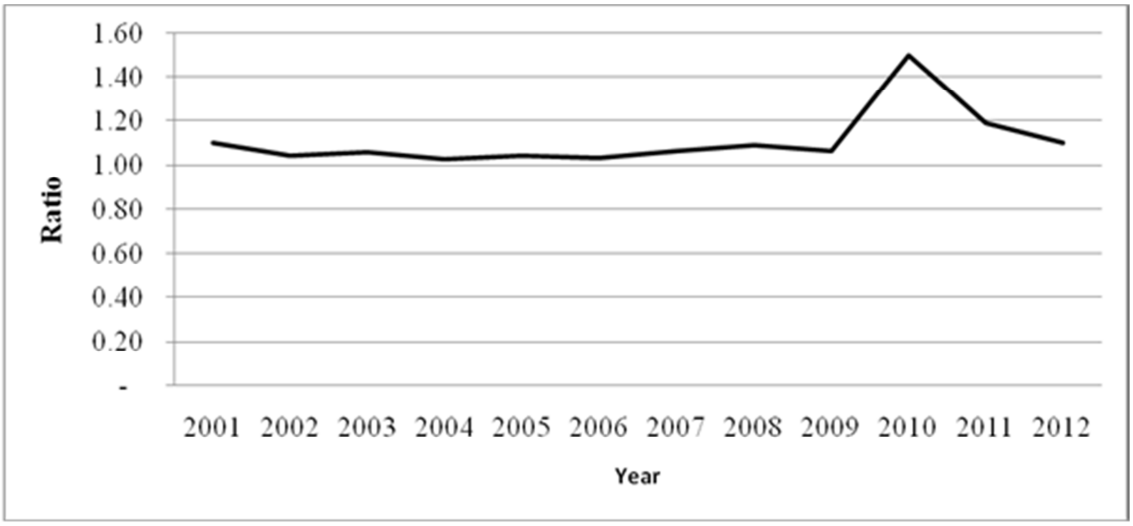

Figure 4: KWS Current Ratio (2001-2012)

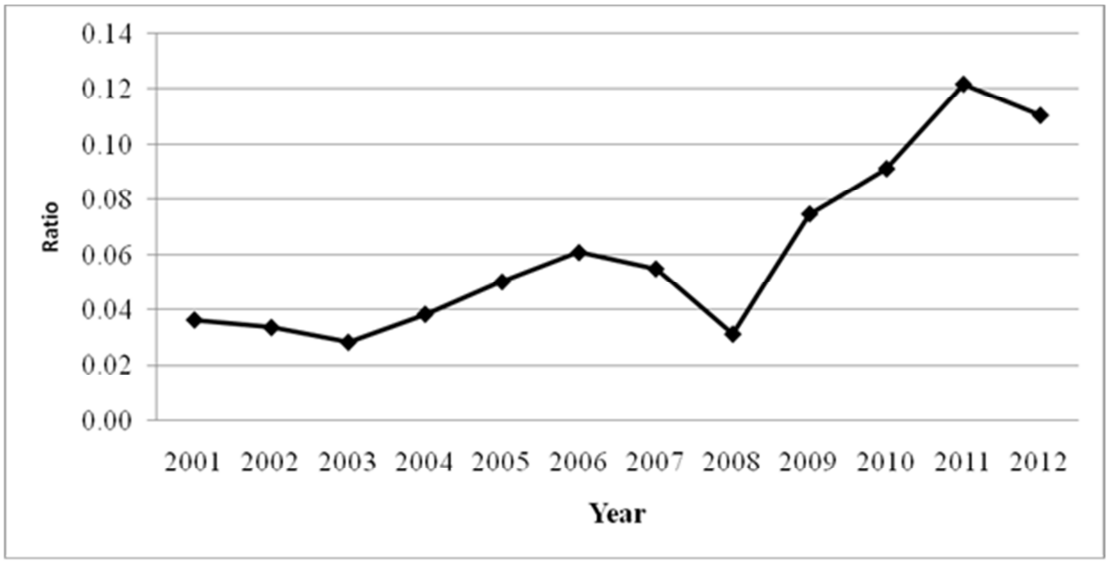

Figure 5: KWS Asset Turnover Ratio

The amount of revenues generated per Kenya Shilling of assets by KWS. The Asset Turnover ratio was used to indicate the efficiency with which KWS was deploying its assets. Generally the ration was below 1 indicating that however hard KWS employed its Asset, according to the secondary data collected from financial statements, KWS did not generate enough revenue. It is important to note that there was an increase in 2010 and 2011 indicating the effect of Safari Card showing that KWS was putting into use its asset and was generating revenue which would leak due to poor revenue risk management in place (see table 4).

Current ratio was used to ascertain whether KWS short-term assets (cash, cash equivalents, marketable securities, receivables and inventory) were readily available to pay off its short-term liabilities (notes payable, current portion of term debt, payables, accrued expenses and taxes). The study established a positive more than 1 ratio throughout the years indicating that KWS had ability to pay off its short term liabilities as to when they occurred. It is important to note that this ability improved more in 2010 when Safari Card was introduced.

Table 2: Correlation between Safari Card Transactional Risk with Financial Performance

Correlations	Transaction	Current ratio	Working Capital	Asset Turnover
Transaction	1.000	*0.460	-0.412	-0.087
Significance le		0.04	0.07	0.71

The study established a strong positive correlation with P<0.05 between Safari Card Risk Management and current ratio, an insignificant negative Correlation of -0.412 with P=0.07>0.05 between Safari Card Risk Management and working capital and an insignificance negative correlation of -0.087 with P=0.71>0.05.

This finding indicated that the introduction of Safari Card as a transactional risk reduction system made KWS to increase its liquidity as a measure of financial performance, although the system did not improve working capital that is the system did not make the Company obtain different credits from providers as a source of operating liquidity towards its operations. The finding also indicated that the system did not influence the use of the company's asset in generating sales revenue or sales income.

4.2 Effect of Safari Card Cash Handling Risk Management on Financial Performance

Table 3: Safari Card Cash Handling Risk Management

Cash handling	N	Min.	Max.	Mean	Std. Dev.
Reduces cash handling risk	283	1	5	4	1.3
Reduces exposure to cash handling	283	1	5	4	1.3
Reduces collation with customers	283	1	5	3	1.3
Reduces tedious paper work	283	1	5	3	1.4
It ensures safety of cash	283	1	5	3	1.4
Automatically bank	283	1	5	3	1.6

The study established that Safari Card risk management system reduced risk associated with cash handling and also reduced exposures to cash handling risk. This was evident by the respondents who agreed on these two aspects of cash handling expressed in the Likert Scale where the mean of 4 represented Agree. The respondents were not sure whether the system; reduced collation with the customers during cash handling, reduction in the tedious paper work, safety of an equivalent of cash out of transaction and the system's ability to automatically bank the produce out of a transaction. This was evident with the respondents mean choice which was 3 representing not sure.

This finding indicated that Safari Card was able to reduce risk associated with cash handling and also reduced exposures to cash handling risk, although it was not clear in the respondents mind whether it could reduce collation with the customers during cash handling, reduce the tedious paper work associated with cash handling, safety of an equivalent of cash out of transaction and the system's ability to automatically bank the produce out of a transaction.

Table 4: Correlation between Safari Card Cash Handling Risk with Financial Performance

Correlations	Cash	Current ratio	Working Capital	Asset Turnover
Cash	1	0.534	0.515	-0.176
Significance		0.015	0.020	0.459

**Correlation is significant at the 0.05 level (2-tailed).*

The study established a strong positive correlation with P=0.015<0.05 between Safari Card cash Risk and current ratio, a strong positive correlation with P=0.02<0.05 between Safari Card cash Risk and KWS working capital but an insignificant negative Correlation of -0.176 with P=0.459>0.05 between Safari Card Risk cash handling and asset turnover.

This finding indicated that the introduction of Safari Card cash handling system positively improved KWS liquidity and also created trust where creditors could extend working capital to the organization although it did not improve efficiency where by KWS assets were optimally used to generate the required liquidity in a short term.

4.3 Effect of Customers' Relationship Management Brought By Safari Card System on Financial Performance

Table 5: Safari Card Customer Relations Risk Management

Customer Relation	N	Min.	Max.	Mean	Std. Dev.
Payments can be traced electronically	283	1	5	3	1.5
Reduces customer dissatisfaction	283	1	5	3	1.5
Zero corruption tolerance	283	1	5	4	1.4
Electronically identification of customers	283	1	5	4	1.3
Tariffs automatically updated	283	1	5	4	1.5

The study established that the introduction of Safari Card at KWS helped the organization to achieve zero corruption tolerance in tempering with revenue, the system also improved customers' relations by electronically identifying each customer and automatically updating tariff so that there were no arguments when it comes to tariffs. This was evident by the mean response of 4 on these three aspects of customers' relations which according to Likert Scale was Agree. On the other hand, respondents were not sure whether Safari Card system made customers payments traceable electronically and it did not reduce the already expressed customers' dissatisfaction. This was evident by respondent mean choice of 3 which represented not sure.

The finding showed that the introduction of Safari Card System helped the organization to achieve zero corruption tolerance in tempering with revenue, the system also improved customers' relations by electronically identifying each customer and automatically updating tariff so that there were no arguments when it comes to tariffs but did not expressively make customers payments traceable electronically and it did not reduce the already expressed customers' dissatisfaction.

Table 6: Correlation between Safari Card Customer Relations Risk with Financial Performance

Correlations	Customer Relations	Current ratio	Working Capital	Asset Turnover
Customer Relations	1	-0.283	-0.281	-0.029
Significance		0.227	0.230	0.902

The study established a negative insignificance correlation of -0.283 with P=0.227>0.05, -0.281 with P=0.230>0.05, -0.029 with P=0.902>0.05 between current ratio, working capital, asset turnover and customers relations. This finding indicated that the introduction of Safari Card Customers Relations risk management system did not positively influence KWS liquidity, working capital and use of its assets optimally to generate the required short term liquidity.

4.4 Effect of Financial Information Management Brought By Safari Card System on Financial Efficiency

Table 7: Safari Card Financial Information Risk Management

Financial Information Risk	N	Min.	Max.	Mean	Std. Dev.
Automatic generation	283	1	5	3	1.4
Information transparently available	283	1	5	4	1.1
No unauthorized changes	283	1	5	4	1.2
Information is shared	283	1	5	3	1.1
access electronically controlled	283	1	5	3	1.2
There is audit controls	281	1	5	3	1.2

The study established that the introduction of Safari Card brought the following benefits as far as financial information risks are concern; financial information were transparently available for decision making and there was also controlled access. This was evident by the respondents choice mean score which was 4 representing Agree in Likert Scale. On the other hand, the respondents were not sure whether Safari Card could; automatically generated financial transactions, share information across the network, electronically control access and enhance audit controls for purposes of improved reliability. This was evident by the respondents' choice of 3 which according to Likert scale meant respondents being not sure.

This finding indicated that the introduction of Safari Card brought the following benefits as far as financial information risks are concern; financial information were transparently available for decision making and there was also controlled access.

Table 8: Correlation between Safari Card Financial Information Risk with Financial Performance

Correlations	Financial Information	Current ratio	Working Capital	Asset Turnover
Financial Information	1	-0.274	-0.294	-0.045
Significance		0.227	0.230	0.902

The study established a negative insignificance correlation of -0.274 with P=0.227>0.05, -0.294 with P=0.230>0.05, -0.045 with P=0.902>0.05 between current ratio, working capital, asset turnover and customers relations. This finding indicated that the introduction of Safari Card financial information risk management system did not positively influence KWS liquidity, working capital and use of its assets optimally to generate the required short term liquidity.

5 CONCLUSIONS AND RECOMMENDATIONS

The introduction of Safari Card as a transactional risk reduction system made KWS to increase its liquidity as a measure of financial performance, although the system did not improve working capital that is the system did not make the Company obtain different credits from providers as a source of operating liquidity towards its operations. The finding also indicated that the system did not influence the use of the company's asset in generating sales revenue or sales income. Secondly, the introduction of Safari Card cash handling system positively improved KWS liquidity and also created trust where creditors could extend working capital to the organization although it did not improve efficiency where by KWS assets were optimally used to generate the required liquidity in a short term. Thirdly, the introduction of Safari Card Customers Relations risk management system did not positively influence KWS liquidity, working capital and use of its assets optimally to generate the required short term liquidity. Four, the introduction of Safari Card financial information risk management system did not positively influence KWS liquidity, working capital and use of its assets optimally to generate the required short term liquidity.

Based on the findings of this study, the following recommendations were important as far as analysis of Safari Card as a revenue risk management practices on financial performance by Kenya Wildlife Services. First, KWS should increase awareness among employees about revenue leakage and its effect on financial performance as the first step of dealing with challenge. Safari Card system should also be promoted among employees as a matter of awareness and also promoted among the Conservation clients in order to popularize the system. Second, KWS should first popularize the objectives of its revenue risk management practices. This can be done through carrying out participatory revenue risk assessments, designing an effective electronic systems that can reduce exposure to risk, implementing the system effectively and continuously monitoring and evaluating its performance for purposes of improving the system and hence reducing revenue leakages and associated risks. Third, the employees and key customers should be trained on the key elements of Safari Card system as a way of creating awareness of the key features of the system. This will enable the employees and the end users to freely interact with the system in a manner that will enhance its use and hence reduction of revenue risks. Four, KWS should not only use the system as a quick financial tool for sealing revenue leakages and hence enhancing revenue collection but also design it in such a way that it can create creditors confidence to inject more working capital and also incorporate it in efficient use of asset as a means of generating more revenue from the exiting asset. Five, KWS should re-evaluate the system to establish how improved cash handling brought about by Safari Card system could also target the existing assets with a view of operating them optimally so that they can generate the required short term liquidity. Five, KWS should re-evaluate Safari Card system with a view to aligning it with the organization's improvement on liquidity, working capital and proper use of assets to generate the required short term liquidity. Last, KWS should re-evaluate Safari Card financial information risk with a view to aligning it with the organization's improvement on liquidity, working capital and proper use of assets to generate the required short term liquidity.

REFERENCES

[1] Armeanu, D. and Bãlu, F. O., (2007). 'Foreign Exchange Risk in International Transactions', Theoretical and Applied Economics, Asociatia Generala a Economistilor din Romania - *AGER, vol. 3(3(508)), pp. 65-70.*

[2] Brigham, E. F., Gapenski, C. G. & Daves, P. R. (1999). *Intermediate Financial Management* (6th ed.). Orlando: The Dryden Press.

[3] Chiang, W., Chen, J., Xu, X., (2007). An overview of research on revenue management: current issues and future research. *International Journal of Revenue Management 1 (1), 97–128.*

[4] Choi, S., Mattila, A., (2006). Impact of information on customer fairness perceptions of hotel revenue management. *Cornell Hotel & Restaurant Administration Quarterly 47 (1), 27–35.*

[5] Domingo-Ferrer, J., J. Posegga, et al. (2007). "Advances in smart cards." *Computer Networks51(9): 2219-2222.*

[6] Eichhorn, F. J., (2004). 'Financial Risk Management bei deutschen Mittelständlern

[7] Fabozzi, F. J., & Peterson, P. P. (2003). *Financial Management and Analysis* (2nd ed.). NewYork: John Wiley & Sons, Inc.

[8] Fujimura K, Nakajima Y, Sekine J. (1999). Xml ticket: generalized digital ticket definition language. *W3C XML-Dsig'99; 1999*.

[9] Hayat, A., T. Rössler, et al. (2006). "Electronic Identity: The Concept and its Application for e-Government." Ministry of IT&T, Government of Pakistan.

[10] Heo, C.Y., Lee, S., (2011). Influences of consumer characteristics on fairness perceptions of revenue management pricing in the hotel industry. *International Journal of Hospitality Management 30, 243–251.*

[11] Iseki, H., Yoh, A.C., Taylor, B.D., 2007. Are Smart Cards the Smart Way to Go? Examining the Adoption of Smart Card Fare Systems Among US Transit Agencies*. 86th Annual Meeting of the Transportation Research Board, Washington, 22 p. (CD-ROM).*

[12] Jorns O, Jung O, and Quirchmayr G. (2007). A privacy enhancing service architecture for ticket-based mobile applications. *In: 2nd International Conference on Availability, Reliability and Security. Vienna, Austria, vol. 24; Apr 2007. p. 374e383. ARES 2007-The International Dependability Conference.*

[13] Kenya Wildlife Service Annual Report 2011

[14] Kimes, S. E. (2005). *A strategic approach to yield management*. In A. Ingold, U. McMahon-Beattie, & I. Yoeman (Eds.), Yield management: Strategies for the service industries, 2nd ed. (pp. 3−14). London: Thomson Learning.

[15] Kimes SE. (2003). Revenue management: a retrospective. Cornell Hotel and Restaurant *Administration Quarterly 2003;131–8.*

[16] Kimes, S.E., Barrash, D.I., Alexander, J.E., (1999). Developing a restaurant revenue management strategy. *Cornell Hotel and Restaurant Administration Quarterly 34 (5), 18–30.*

[17] King Report on Corporate Governance for South Africa (2002). *SEE Institute of Directors in South Africa*.

[18] Kumar, P. R., & Ravi, V. (2007). Bankruptcy prediction in banks and firms via statistical and intelligent techniques – A review. *European Journal of Operations Research, 180(1), 1–28.*

[19] Lam, J. (2003). Enterprise Risk Management: From Incentives to Controls. New York: John Wiley & Sons.

[20] Mathies, C., Gudergan, S., 2007. Revenue management and customer centric marketing—how do they influence travellers' choices? *Journal of Revenue and Pricing Management 6 (4), 331–346.*

[21] Mramor D., Valentincic A.,(2003). Forecasting the liquidity of very small private companies, *Journal of Business Venturing Volume 18, Issue 6, 2003, Pages 745–771, DOI: 10.1111/1475-679X*

[22] Nassauer, F. and Pausenberger, E., (2000). '*Governing the corporate risk management function: regulatory issues*', in Frenkel, M., Hommel, U. and Rudolf, M., 'Risk Management', Springer-Verlag, Berlin.

[23] Pinches, G. E. (1997). *Essentials of financial management* (4th ed.). London: Addison Wesley Educational Publishers, Inc.

[24] Rankl, Wolfgang & Effing, Wolfgang (2003). "*Smart Card Handbook*," John Wiley & Sons Ltd

[25] Ross, A. S; Westerfield, W.R; Jordarn D. B(3rd Eds). (2001) Essentials of Corporate Finance. New York: McGraw-Hill/Irwin.

[26] San José L., Iturralde, T., & Maseda, A. (2008). Treasury Management Versus Cash Management. *International Journal of Finance and Economics, 1450−2887 (19).*

[27] Shapiro, A. C. (2002). *Multinational Financial Management* (7th ed.). New York: John Wiley & Sons.

[28] Shen, J. J., C. W. Lin, et al. (2003). "Security enhancement for the timestamp-based password authentication scheme using smart cards." *Computers & Security22(7): 591-595.*

[29] Smithson, C. W.; Smith C. W. Jr. and Wilford D. S. (1995). '*Managing Financial Risk. A Guide To Derivative Products, Financial Engineering, and Value Maximization'*, Irwin Professional Publishing, Chicago.

[30] Tam, K. Y. and S. Y. Ho (2007). "A Smart Card Based Internet Micropayment Infrastructure: Technical Development and User Adoption." *Journal Of Organizational Computing And Electronic Commerce17(2): 145.*

[31] Wirtz, J., Kimes, S., Ho, J., Patterson, P., (2003). Revenue management: resolving potential customer conflicts. *Journal of Revenue and Pricing Management 2 (3), 216–226.*

[32] Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, F. D. 2003. "User Acceptance of Information Technology: Toward a Unified View," *MIS Quarterly (27:3), pp 425-478*.

[33] Vickery, J.; (2006). '*How and Why Do Small Firms Manage Interest Rate Risk? Evidence from Commercial Loans*', Federal Reserve Bank of New York, Staff Report no 215, pp. 1-48.