

Benefits and Risks of E-Banking: Case of Commercial Banking In Zimbabwe

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Abstract

This research paper sought to analyse the benefits and risks of electronic banking for commercial banks in Zimbabwe. A cross sectional survey was used to address the objectives and hypothesis of the study. The results revealed that e-banking in Zimbabwe has five critical success factors which are the use of e-banking for cutting costs, to enhance customer loyalty, to offer convenience, to improve profitability and competitive marketing. The study showed that the major benefits of e-banking are improved convenience to customers, cost reduction and an improvement in customer loyalty. The perceived risks of e-banking were revealed to be low levels of computer literacy, low security levels, lack of access to the internet for the majority of the population and operational problems associated with computer systems for most banks. The findings of the study imply that banks should invest more in improving customer awareness of e-banking products and reduce perceive risks of e-banking. The government and monetary authorities must improve legislation and infrastructure to encourage faster adoption of e-banking technologies.

Keywords: Electronic banking, risks, commercial banks, Zimbabwe

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I. INTRODUCTION

Over the past 15 years the banking industry in Southern Africa has undergone a recognizable metamorphosis (Nokaneng, 2009). Some of the changes have been positive and some have been adverse to the long-run sustainability of the sector. In Zimbabwe, over the past twelve years the banking sector has undergone great metamorphosis because of policy related issues, corporate governance failures of the early 2000s, and the meltdown of the economy which climaxed in 2008 with rampant speculative behaviour in the financial sector of the economy and industry specific factors (Reserve Bank of Zimbabwe, 2011). In the early 2000s there were seismic shifts in the morphology of the banking sector in Zimbabwe owing to a wave of bank failures which saw institutions such as Century Bank, Trust Bank, Barbican Bank, Royal Bank and CFX Bank facing viability problems, with some banks being put under curatorship by the Reserve Bank of Zimbabwe (RBZ) (RBZ, 2006, Njanike, 2009). This paper seeks to contribute to the debate on the upside and downside of the ongoing electronic banking revolution.

II. LITERATURE SURVEY

Electronic banking refers to the provision of retail and small value banking products and services through electronic channels. Electronic banking (E-banking) is the provision of financial services and markets using electronic communication and computation. Today banks are switching to multi-channel distribution of financial services in hybrid platforms, where the traditional services of banks are provided through “bricks and mortar” branches. Such may include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money (Basel Committee Report on Banking Supervision, 2003). Some authors use the following terms interchangeable when referring to electronic banking, PC banking, internet banking, cell phone banking, online banking and virtual banking. Internet banking refers to systems that enable bank customers to get access to their accounts and general information on bank products and services through the use of bank’s website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (Dube et al 2009). Chang (2003), Sullivan and Wang (2005) on the other hand view internet banking as being process innovation which involves customers handling their own banking transactions without

visiting bank tellers. Henry (2000) cited by Dube et al (2009) observes that internet banking can be divided into two types namely informational websites and transactional websites. Informational websites provide customers access to general information about the financial institution and its products or services whilst transactional websites enable bank customers to carry out specific transactions.

The table below shows some of the services that financial institutions offer through transactional websites.

Table 1: E-Banking Services

Retail Services	Wholesale Services
Account management	Account management
Bill payment and presentment	Cash management
New account opening	Small business loan applications, approvals, or advances
Consumer wire transfers	
Investment/Brokerage services	Commercial wire transfers
Loan application and approval	Business-to-business payments
Account aggregation	Employee benefits/pension administration

Source: Information Technology Examination Handbook, Vol. 1, 2002

Closely related to e-banking is the term e-money which involves the transfer of cash via electronic means. The BIS (2003) defines e-money as stored value or prepaid payment mechanisms for executing payments via point of sale terminals, direct transfers between two devices, or over open computer networks such as the internet.

III. The critical success factors of e-banking

Housing electronic banking services depends on a number of critical factors. Shah et al (2009) argues that emphasis must be placed on the need to identify critical issues related to financial organizations when they want to establish business online. Rockart (1979) defines critical success factors as the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization. Therefore in as much as e-banking can be viewed as an effective marketing tool these critical success factors must be carefully examined for the successful implementation of electronic banking (Shah et al, 2009). In order for commercial banks to be successful in e-banking, reconfiguration must start internally. According to El Sawy et al (1999) current business designs and organisational models are insufficient to meet the challenges of doing business in the e-commerce era. Therefore, re-engineering internal business processes which also involves transformation of the existing technology is critical for banks. On internal processes also providing quick and efficient customer service is of great importance (Orr, 2004).

Security is important in setting up an e-banking facility. According to Regan and Macaluso (2000) security implies offering secure transactions as well as secure front end and back end systems. In building up a secure transactions systems factors that have to be considered are improving customer trust and integrating the current services offered to the customer in the new system (Enos, 2000). In setting up e-banking services commercial banks must make sure that the systems are well integrated and more convenient to the customer. Consumers do not want to navigate from website to website to access services, web services have to be convenient, easier to use, and less expensive than the alternative traditional banking to win the loyalty of customers (Cronin, 1998 cited in Shah et al, 2009). The interactive nature of e-banking brings more understanding of the customer. According to Franco and Klein (1999) the data gathered about customer-bank interaction can be analysed using mining techniques and this marketing decision support capability will ultimately determine the success of the bank's electronic banking services.

The integration process also has to include the merging of e-banking with traditional delivery channels such as ATMs. King and Liou (2004) say processing across channels has to be real time to avoid inconvenience. Kerem (2002) postulates that there are management issues that have to be taken into account to ensure the success of e-banking. Kerem (2002) argues that in implementing e-banking management should view it, not as a campaign but a long term process which is an investment made by the bank. Thus developing technological solutions must be linked to business strategy which integrates product and service delivery. According to Stamoulis (2000), banks usually feed their websites with corporate profile, product and pricing information, interest rates and application forms. Stamoulis (2000) views re-drawing of the internet market maps as a vital prerequisite for the electronic banking strategy, because the internet requires different marketing methods than other service distribution channels.

Therefore the richness of a medium's content plays a big role and is critical in attracting a large number of consumers of e-banking services. Excellent customer service is the key in developing successful e-banking services. According to the perspective of Regan and Macaluso (2000) the internet can transfer power from the supplier to the customer and superior customer service is essential to maintaining customer loyalty. Orr (2004) sees provision of a pleasant experience on the delivery channels as one of the key requirements in adopting successful e-banking services. Franco and Klein (2009) stress the importance of upgrading technological infrastructure to bring it up to the speed with internet trade.

IV. BENEFITS OF ELECTRONIC BANKING

Banks just like other businesses are tuning to information technology to improve business efficiency, service quality and attract new customers (Nath et al, 2001). Al-Sukkar and Hasan (2005) aver that the most important factors encouraging consumers to use online banking are lower fees followed by reducing paper work and human error. Subsequently electronic channels can lead to lower transaction costs which are very competitive (Claessens and Kliengbiel, 2000). Kiang et al (2000) is of the view that disputes can be minimised between the employees as there is a clear flow of processes. Conducting business outside the normal branch working hours has also been a factor that has been considered convenient for bankers. According to Jayawardhena and Foley (2000) each ATM has the capacity to carry out the same, essentially routine, transactions as do human tellers in branch offices but at half the cost and with a four to one advantage in productivity. Thus banks can provide customers convenient, inexpensive access to the bank 24 hours a day and seven days a week.

Increased availability and accessibility of more self service distribution channels help bank administration in reducing the expensive branch network and associated staff overheads (Birch and Young, 1997). A reduction in the percentage of customers visiting the banks with an increase in alternative channels of distribution will also minimise the queues in branches (Thornton and White, 2001). According to Thornton and White (2001) this ultimately leads to improved customer satisfaction. Jayawardhena and Foley (2000) observe that electronic banking increases competition within the banking system and also from non-bank financial institutions. Electronic banking also increases the power of the customer to make price comparisons across suppliers quickly and easily and as a consequence this pushes prices and margins downward (Devlin, 1995).

Kerem (2003) observes that banks are responding to electronic banking differently and that those which see electronic banking as a complement and substitute to the traditional channels achieved better communication and interactivity with the customers. Online banking extends the relationship with the customers through providing financial services right into the home or office of customers (Robinson, 2000). Al-Sukkar and Hassan (2005) support the view that technology can improve service quality for banks and enhance customer satisfaction and loyalty. According to Nath et al (2001) provision of high quality services may also lead to high profit consumers for the bank. Polatoglu and Ekin (2001) argue that early adopters and heavy users of internet banking services are more satisfied with the services compared to the other customer groups. According to Joseph and Stone (2003) the ability to deliver services via technology is positively correlated with satisfaction. Smith (2006) emphasizes the importance of human and technology based delivery channels in improving the level of bank customer satisfaction, retention, and switching. E-banking customers do not face problems of handling a lot of money, submission of utility bills and waiting in a long queue for services.

In Bangladesh, there is huge demand for e-banking from the business community as well as the urban retail customers. Rahman (2009) observes that 99 percent of the branches of private commercial banks (PCBs) in Bangladesh were computerized by December 2006. The average for all bank branches was 37 percent since only 4 percent and 16 percent of specialized banks (SBs) and state-owned commercial banks (SCBs) respectively were computerized. One of the most important developments in Zimbabwe's banking sector has been the steady but sometimes disturbed development of electronic banking (Dube et al, 2009). The adoption of electronic banking in Zimbabwe has been underpinned by the growth of internet connectivity in the country. Internet has changed the dimensions of competition in the retail banking sector. In Zimbabwe the adoption of electronic banking services was first visible in the early 1990s where Standard Chartered Bank and CABS set up the first ATMs. Over the past years other electronic banking products have come into sight such as the Electronic Funds Payment systems, telephone-banking, PC banking and even internet banking (Njanike, 2010). It has been observed that growth in internet connectivity Zimbabwe has greatly improved financial inclusion of previously marginalized and excluded communities in the Zimbabwean economy. Technological innovations and competition in the banking sector have improved accessibility to a wide range of services to retail and wholesale customers.

Electronic banking has been viewed as an invaluable and powerful tool driving development, supporting growth, promoting innovation and enhancing competitiveness (Kamel, 2005 and Nath et al, 2001). The evolution of banking technology has been evidenced by transitions from ATMs, phone banking, PC banking to internet banking (Chang, 2003). Other studies show that electronic banking has been adopted by banks to achieve a competitive advantage, reduce costs and maintain a strategic position (Bradley and Stewart, 2003). Zimbabwe also has been part of the worldwide trend into the use of advanced technology, and this has been recognized through growth in the usage of electronic delivery channels such as ATMs and the internet.

Other benefits that have accrued because of the adoption of electronic banking in developed countries include the ability to attract new customers and widening the customer database, improving bank marketing and communication, and having the ability to retain high profit customers (Al-Sukkar and Hasan, 2005). Lack of user-friendly technology, customer demand, high initial set-up costs, redundancy of existing high-cost legacy systems, economic instability, regulatory controls and lack of suitable skills have been highlighted as some of the most important issues delaying the adoption or diffusion of electronic banking (Bradley and Stewart, 2003, Kerem, 2003 and Chang, 2003). In Zimbabwe the adverse sector specific factors hampering the adoption or diffusion of electronic banking were exacerbated by the economic downturn which started in 1997 and culminated in the economic meltdown of 2008 (Njanike, 2008, Kairiza, 2009).

V. RESEARCH ELABORATIONS

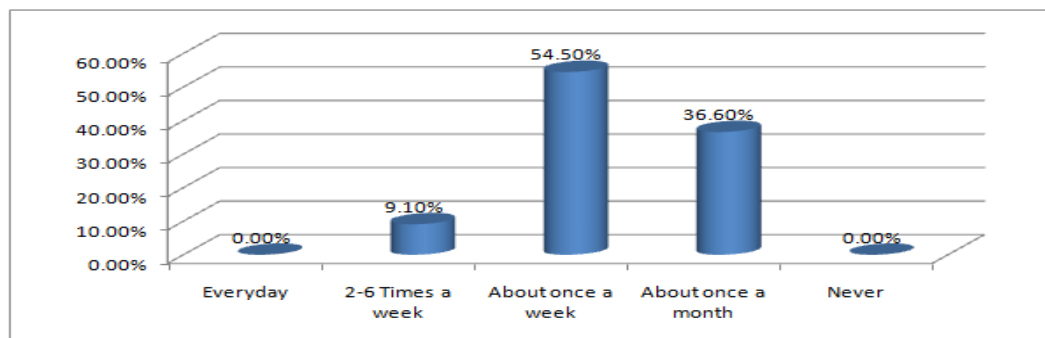
A cross sectional survey was conducted due to the nature of the research topic and the targeted population. The assessment was carried out on the following 13 commercial banks Agribank, Barclays, Commercial Bank of Zimbabwe (CBZ), First Banking Corporation (FBC), Kingdom, Merchant Bank of Central Africa (MBCA), Metropolitan, National Merchant Bank of Zimbabwe (NMBZ), Stanbic, Standard Chartered, (Tawanda Nyambirai) TN Bank, ZB Bank and Zimbabwe Allied Banking Group (ZABG). This list of commercial banks excludes Interfin Banking Corporation, Trust Bank, Royal Bank and Banc ABC for the purposes of this research, as they had not yet established their presence in the commercial banking business in the period under study that is from 2000 to 2010. Non-probability sampling technique was used for the purposes of this research because of the small population size of the target banks. Purposive sampling was adopted to obtain some specific results from key informants and this was done by targeting individuals in the Operations department, ICT Department and the E banking department. These respondents were targeted because of the assumption that they are in a better position to know about information technology issues in banks. At least two questionnaires were submitted to every commercial bank under assessment. Personal interviews were done to compliment the questionnaires.

VI. RESULTS AND DISCUSSION

6.1 Impact of e-banking to operational efficiency of commercial banks

All the five respondents that were interviewed concurred that e-banking services have extended their distribution channels, and improved coverage to customers by their banks. Interview results show that four banks were now able to offer services such as balance enquiries through sms banking, statement requests and even money transfers. Respondents were asked about the reliability and efficiency of their systems. Half of the respondents revealed that their systems were always operational 70-89 percent on a weekly basis, while 41 percent of them said their systems were working 90-100 percent a week. Nine percent of the respondents revealed that their systems worked with 50-69 percent reliability on a weekly basis. The figure below shows the frequency of system failures for the banks that were surveyed.

Figure 1 – The Number of Times Banks Report System Failures



6.2 Source: Primary Data

The results obtained also revealed that 68 percent of the respondents did state that electronic banking does not lead to high transaction processing errors while 32 percent of the respondents were of the opposite view.

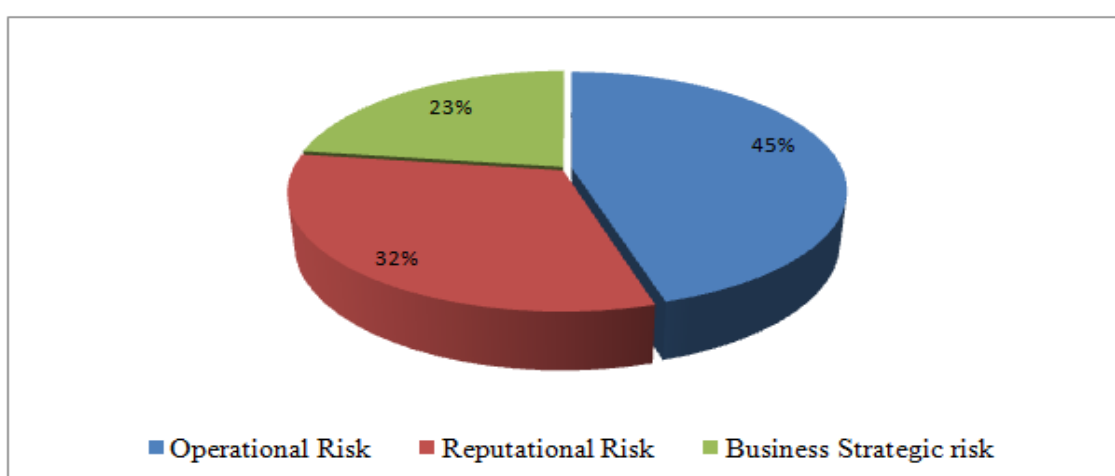
6.3 The benefits of electronic banking

Seventy three percent of the respondents were of the view that e-banking offers more convenience to customers. Sixty four percent of the respondent viewed e-banking as a cost cutting measure. Forty-five percent of the respondents maintained that customer service improves through e-banking while 36 percent of the respondents strongly believed that customer loyalty is enhanced by e-banking technology.

6.4 The risks associated with electronic banking

The figure below captures the main risks perceived by respondents as posing the biggest threat to the viability of banks in a technology driven economic environment.

Figure 2: Risks that commercial banks are exposed to in adopting e-banking



6.5 Source: Primary Data

Forty five percent of the respondents were of the view that banks become more vulnerable to operational risk whilst 32 percent of the respondents cited reputational risk as the main challenge faced by banks that adopt e-banking. Twenty three percent viewed business strategic risk as being the biggest challenge faced by banks that embrace e-banking technologies. The survey also measured the effect of the cost of implementing e-banking which also poses risks to the bank. Eighteen respondents indicated that it was costly to implement electronic banking while the remaining four observed that it was not costly to implement e-banking.

Survey results thus reveal that while e-banking presents a bank with potential to improve its business activities; there are threats that emerge with bank product innovation and new channels of service delivery. These threats to the viability of banks imply a need for banks to craft sound risk management frameworks so as to contain certain risks that are inherent in bank product innovation. The study revealed that when e-banking is adopted by banks, fraud is the riskiest with 45 percent of the respondents holding that notion, followed by money laundering with 31.81 percent of the respondents and lastly hacking with 22.72 percent. These findings show that the respondents felt that fraud cases were the most risky to the operations of the bank.

VII. CONCLUSION

The research results show that by adopting e-banking banks expose themselves to operational and reputational risks. If e-banking is to be successful in Zimbabwe, the services must be carefully integrated into the traditional system so as to avoid causing unnecessary disruptions to any services offered by the bank. The study also concludes that fraud poses the biggest challenge to commercial banks as they adopt electronic delivery channels. The cost of implementation for e-banking can be too high for commercial banks as it largely requires infrastructural development, training of staff members and sometimes even outsourcing some of the electronic banking services. The adoption of e-banking requires the incorporation of sound risk management principles for it to be effective. Each financial institution should apply guidelines based on its scope and level of sophistication. Typically, electronic banking amplifies the scale of exposure of banks to traditional risks, such as

transaction, strategic, reputational, and compliance risks, among others. Therefore, banks should ensure that there are adequate policies and procedures relating to risk management which involve an element of a segregation of duties; an effective security program has been implemented with appropriate communication on policy, procedures, and practices, with the necessary support from the bank's directorate.

REFERENCES

- [1] Al-Sukkar, A., and Hasan, H. (2005) Towards a Model for the Acceptance of Internet Banking in Developing Countries. *Information Technology for Development*. Vol. 11, No. 4, pp. 381-398.
- [2] Basel Committee On Banking Supervision (2003), Risk Management Principles for Electronic Banking, Bank for International Settlements
- [3] Bradley, L. and Stewart, K. (2003) "Delphi Study of Internet banking", MCB UP Limited, pp 273-279
- [4] Birch, D., Young, M.A. (1997), "Financial services and the Internet: what does cyberspace mean for the financial services industry?" *Internet Research: Electronic Networking Applications and Policy*, Vol. 7 No.2, pp.120-6
- [5] Chang, Y. T. (2003) "Dynamics of Banking Technology Adoption: An Application to Internet Banking," Department of Economics, Workshop Presentation, University of Warwick, Coventry, UK
- [6] Claessens, S, T. Glaessner and D. Klingebiel. (2001) 'E-Finance in Emerging Markets: Is Leapfrogging Possible?' World Bank Financial Sector Discussion Paper No. 7
- [7] Crisp, B. S. Järvenpää and P. Todd (1997) 'Individual Differences and Internet Shopping Attitudes and Intentions.' Working Paper. University of Texas. Unpublished p 19
- [8] Daniel, E. (1999) Who Dares Wins? Online Banking Services and Innovation Types, Hackney, R.(Ed.) Proceedings of 9th Annual Business Information Technology Conference, Paper No. 34. November 3-4, Manchester, UK
- [9] Davis, F. D. (2000). "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology." *MIS Quarterly* 10(3): 318-340
- [10] Devlin, J. F. (1995) Technology and Innovation in Retail Banking Distribution, *International Journal of Bank Marketing*, Vol. 13, No. 4, pp. 19-23.
- [11] Dube, T, Chitura, T. and Runyowa L (2009) Adoption and Use of Internet Banking in Zimbabwe: An Exploratory Study, *Journal of Internet Banking and Commerce*, April 2009, Vol. 14, 2009, No.1
- [12] El Sawy, O. A., Malhotra, A., Gosain, S., Young, K. M. (1999) IT-Intensive Value Innovation in the Electronic Economy: Insights from Marshall Industries, *MIS Quarterly*, Vol. 23, No. 3, September, pp.305-335.
- [13] Enos, L. (2001) Report: Critical Errors in Online Banking. *e-Commerce Times*, April 11, <http://www.ecommercetimes.com/story/8867.html> (last accessed 22 June 2012)
- [14] Franco, S. C., Klein, T. (1999) Online Banking Report, Piper Jaffray Equity Research, www.pjc.com/ec-ie01.asp?team=2 (last accessed on 21 June 2012)
- [15] Jayawardhena, C. and Foley, P. (2000) Changes in the Banking Sector – the Case of Internet Banking in the UK, *Internet Research: Electronic Networking Applications and Policy*, Vol. 10, No. 1, pp.19-30.
- [16] Joseph, M. & Stone, G. (2003), An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in banking sector, *International Journal of Retail and Distribution Management* Vol. 31, Issue 4, pp.190-202.
- [17] Kamel, S. The Use of Information Technology to Transform the Banking Sector in Developing Nations, *Information Technology for Development*, Vol.11, No.4, 2005, pp. 305-312
- [18] Kairiza, T. (2009): 'Unbundling Zimbabwe's journey to hyperinflation and official dollarization,' viewed on <http://www3.grips.ac.jp/~pinc/09-12.pdf> (last accessed on 22 June 2012)
- [19] Kerem K. (2003) "Internet Banking in Estonia", PRAXIS Center for Policy Studies
- [20] <http://unpan1.un.org/intradoc/groups/public/documents/untc/unpan018529.pdf> (last accessed on 22 June 2012)
- [21] Kiang, M.Y., Raghu, T.S., Hueu-Min Shang, K. (2000), "Marketing on the Internet – who can benefit from an online marketing approach?" *Decision Support Systems*, Vol. 27 No.4, pp.383-93.
- [22] King, S.F. and J. Liou, (2004) "A framework for Internet channel evaluation." *International Journal of Information Management*, Dec 2004, Volume: 24 Issue: 6 pp.473-488
- [23] Larpsiri, R., Rotchanakitumnuai, S., Chairsraeko, S., Speece, M. (2002), "The impact of Internet banking on Thai consumer perception", paper presented at the Conference on Marketing Communication Strategies in a Changing Global Environment, Hong Kong
- [24] Min, H., Galle, W.P. (1999), "Electronic commerce usage in business-to-business purchasing", *International Journal of Operations & Production Management*, Vol. 19 No.9, pp.909-21
- [25] Mols, N. P. (1998) The Behavioural Consequences of PC Banking, *International Journal of Bank Marketing*, Vol. 16, No. 5, pp. 195-201
- [26] Nath, R., Schrick, P., and Parzinger, M. (2001) Bankers' Perspectives on Internet Banking *e-Service Journal*, Vol. 1, No. 1 (Fall 2001), pp 21-36
- [27] Njanike, K. (2009) The Impact of Effective Credit Risk Management on Bank Survival http://library.lixin.edu.cn/files/100117/1004/100_975cb5a86ea.pdf (last accessed 18 June 2012)
- [28] Njanike, K. (2010) The Impact of Globalisation on Banking Service Quality in Zimbabwe <http://www.upetd.ro/anale/economie/pdf/20100122.pdf> (last accessed 18 June 2012)
- [29] Njanike, K. (2008): 'Effects of Interest Rate Regime on the Intermediary Role of Banks in Zimbabwe,' *Journal of Sustainable Development in Africa*, Vol. 10, No.3, pp. 51-69.
- [30] Nokaneng, S. H. (2009) Integration of the Financial Sector in Southern Africa <http://upetd.up.ac.za/thesis/available/etd-03282009-130922/unrestricted/03chapters5-6.pdf> (last accessed 18 June 2012)
- [31] Orr, B. (2004) E-Banking job one: Give customers a good ride. *ABA Banking Journal*, Vol. 96, Iss. 5, pp 56-57.
- [32] Polatoglu, V. N., and Ekin, S.(2001) An empirical investigation of the Turkish consumers' acceptance of internet banking services. *International Journal of Bank Marketing*, Vol. 19 No. 4, pp. 157-65
- [33] Rahman M. M. (2009) "E-banking in Bangladesh: Some Policy Implications", <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan046036.pdf> (last accessed on 20 June 2012)
- [34] Regan, K. and Macaluso, N. (2000) "Report: Consumers Cool to Net Banking" *e-Commerce Times*, October 3, <http://www.ecommercetimes.com/news/articles2000/001003-4.shtml> (last accessed on 20 June 2012)
- [35] Reserve Bank of Zimbabwe (RBZ) (2011) Monetary Policy Statement, Harare
- [36] Reserve Bank of Zimbabwe (RBZ) (2006) Supplement to the Monetary Policy Statement, Harare
- [37] Robinson, G. (2000) 'Bank to the future', *Internet Magazine*, www.findarticles.com
- [38] Rockart, J. (1979) Chief Executives Define Their Own Data Needs, *Harvard Business Review*, Vol.57, No. 2, pp. 81-93
- [39] Rogers, E. M. (1995) *Diffusion of Innovations*. 4th ed. The Free Press, 518 p.

- [38] Sathye, M. (1999) Adoption of Internet Banking by Australian Consumer: An Empirical Investigation, *International Journal of Bank Marketing*, Vol. 17, No. 7
- [39] Shah, M. H., Branganza A., Khan S., and Xu M. (2009) "A Survey of Critical Success Factors in e-Banking" 0.1.1.108.6368.pdf (last accessed on 18 June 2012)
- [40] Simpson, J. The Impact of the Internet in Banking: Observations and Evidence from Developed and Emerging Markets, *Telematics and Informatics*, Vol 19. No. 4, 2002, pp. 315–330.
- [41] Smith, A. D. (2006). Exploring security and comfort issues associated with online banking. *International Journal of Electronic Finance*, Vol 1 No. 1, pp.18-48.
- [42] Stamoulis, D. S. (2000) How Banks Fit in an Internet Commerce Business Activities Model, *Journal of Internet Banking and Commerce*, June, Vol. 5, No. 1 <http://www.arraydev.com/commerce/jibc/0001-03.htm> (last accessed 21 June 2012)
- [43] Sullivan R and Wang Z (2005) "Internet Banking: An exploration in Technology Diffusion and Impact, Working Paper No 05-05, Payment Systems Research Department, Federal Reserve Bank of Kansas City
- [44] Thornton, J. and White, L. 2001. "Customer Orientation and Usage of Financial Distribution Channels." *Journal of Services Marketing* Vol. 15 No.3 pp. 168-185.