

**ELECTRONIC BANKING IN A SUB-DUED ECONOMIC ENVIRONMENT. A CASE OF THE  
ZIMBABWEAN ECONOMY (2013 - 2017)**

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**ABSTRACT**

The use of plastic money entails the effecting of business transactions without involving the physical exchange of hard cash or paper money but rather the wiring of money balances between the transacting parties. This trend has gained much popularity over the recent years in Zimbabwe owing to a subdued economic environment where hard cash is increasingly getting hard to come by. This paper sought to examine the effectiveness of electronic banking (e-banking) forms in easing the execution of business transactions without necessarily having to physically exchange cash. A quantitative research design was adopted to enable the researcher to establish the volume of transactions directly attributable to electronic banking and the relationship between availability of e-banking facilities and the volume of transactions effected and hence bank profitability. The study focused on the population of the banking institutions in Zimbabwe and drew a sample of three (3) of the leading banks in the adoption of e-banking, namely CABS, CBZ Bank and Steward Bank. The findings of the study were that: there is strong positive relationship between bank profitability and uptake of e-banking facilities, the number of transactions by bank clients increased tremendously, there was a lot of convenience on the part of clients as transaction could be executed anytime and anywhere, without necessarily having to visit the banking halls, the leading players were also providing point-of-services (pos) to other banks for a commission. However, there were logistical problems in the settlement of the transactions and the transfer of funds to the beneficiary accounts. In view of these challenges, it is therefore recommended that the financial institutions upgrade their systems and improve on networking to ease the business processes.

**Key words:** Electronic banking, Plastic money, Financial intermediation, Financial Charge Backs, Seigniorage.

**Background to the Study**

A subdued economy is an environment where economic activity is depressed such that there are a myriad of economic challenges. Top among such challenges is low money supply and the disrupted circulation of the notes and coins. The Zimbabwean economy has not been spared of this and having adopted the multi-currency regime in 2009, the impact has been enormous considering that there is no room for seigniorage on the part of the Central Bank, the Reserve Bank of Zimbabwe (RBZ). This paved way for an environment in which money is spent without being

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physically carried from one place to another because of the acute shortage of notes and coins. Electronic devices as means of information that reveal how much a person has deposited and has spent became a real necessity. Information technology is key to economic development and it has changed the complexion of banking completely. Banking has now shifted from being entity based to being activity based, thus electronic banking has enable banking transactions to be executed without time bounds and without physical bounds and above all, with greater speed and efficiency. The Zimbabwean financial sector has undergone several changes over the years and the banking crisis of 2007-2008 depleted the public's confidence in the banking system to an all time low level. Most, if not all bank clients lost their hard earned Zimbabwean dollar (Z\$) denominated savings in 2009, after the adoption of the multi-currency regime. This marked the dawn of a new era in the financial services sector, since its business is based on confidence and trust in the system, of which none was existent after the financial turmoil. In order to survive in an environment where they were looked at with lots of suspicion and faced hostility from their supposed customers, banks had to devise means to penetrate this seemingly impenetrable market. The re-thinking and re-strategising by banks ushered in the adoption of electronic banking, which is a computer technology based banking facility which uses computers to carry out banking transactions such as withdrawals through cash dispensers or transfer of funds at point of sale.

Electronic banking helped bring banking services to the banking public rather than them having to go to banking halls to access banking services. The convenience e-banking brought to the public marked the first step of the trust and confidence rebuilding process. Popular e-banking facilities include the Automated Teller Machines (ATMs), Electronic Funds Transfer at Point of Sale (EFTPOS), Telephone Banking (TB) and Internet Banking (IB). These helped ease pressure in banking halls and reclaim the lost clientele. However, the pace of adoption and acceptance did not match the huge capital investments by the banks in the form of infrastructure and systems support. This was in line with the Technology Acceptance Model (Davies: 1989), which outlines a number of variables that need to be satisfied before the public can migrate from traditional banking practices to technology based electronic banking.

The adoption of the multi-currency regime in 2009 saw the United States Dollar (USD), the South African Rand (ZAR) and the Botswana Pula (BWP) form the basket of currencies that were mainly accepted as legal tender. These currencies were being imported into the country, since there have been low export activities, foreign direct investments were scarce and there were huge amounts of capital flights, serious cases of money laundering and an astronomic import bill. The end result was a damaging shortage of hard cash to transact with and the general public was eventually pushed into the acceptance and adoption of plastic money in July 2016. This meant that technology acceptance was enforced by circumstances, as people found e-banking as the viable platform to transact on. However, there was a lot that needed to be done to ensure that this platform would sustain the bulky of business transaction in the economy at large.

The regulatory authorities had to level the playing field by gazetting bank charges, thus cutting down on the previously exorbitant costs of e-banking. On December 12 2016, the RBZ governor

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announced that banks had to adopt a proportional pricing model at the expense of the fixed charge system. The new charges were gazetted at 1% of the total amount withdrawn on the ATM and 1, 25% of the total amount withdrawn Over-the-Counter. The idea is to promote the use of e-banking facilities compared to over the counter banking. There is however, a challenge in the clearing of the transaction funds from the customer's banks to the merchant's bank. RTGS transactions are taking longer to clear and most transactions on POS machines require follow ups as most of the funds will be hanging in the host bank's internal account.

### **Objectives**

To ascertain the impact of e-banking on bank financial performance in a subdued environment

Conduct a cost-benefit analysis of setting up e-banking facilities by banks

Establish the hindrances bank customers face in executing transaction using e-banking facilities

Recommend on how banks and the regulatory authorities can improve their service delivery under e-banking.

### **Literature Review**

One of the prerequisites for economic growth and development is to encourage a payment system that is secure, convenient and affordable (Ajayi and Ojo: 2006). Most developing countries around the world have a large percentage of the population that is unbanked which makes the economy to be heavily cash-based. The operation of an economy on a cash basis is continuously proving to be difficult as the circulation of notes and coins is dwindling. This has had a negative impact on economic growth and development, financial institutions performance and there is increasing disgruntlement by clients leading to a sharp decline in the confidence and trust levels.

The adoption and use of plastic money has however, improved the execution of business transactions, since there is no need to physically exchange notes and coins under this arrangement. Electronic devices reveal how much the person has in their bank accounts and how much they have spent and settlement of the transactions is done electronically. Electronic payment initiatives in Zimbabwe have been undertaken by indigenous firms and have been stimulated by improvement in technology and infrastructure. This has helped a long way in the government initiative of financial inclusion as the penetration of e-banking spreads to previous unbanked sectors of the economy and in rural areas. The process has been facilitated by incorporating mobile service providers, to provide electronic wallets through mobile money transfer systems, such as Ecocash by Econet, Telecash by Telecel and One wallet by Net One.

Daniel Amor (2002) defined e-banking as an automated delivery channel of new and existing traditional banking products services directly to customers through electronic and interactive communication channels. Clients can do critical banking activities and interact electronically with their banks using comprehensive tools such as the internet that helps to reduce administrative costs, increase productivity and improve cash management in a security enhanced environment. They can transact and interact with their bank at anytime and anywhere in the world as long as

their channel is accessible. Earlier on, Essinger (1999) had defined electronic banking as any banking service delivered to the customer by means of a computer – controlled system that does not directly involve the inside of the bank’s bricks and mortar branch. E-banking transactions are paperless based and are not limited by space and time.

Carlson (2001) asserts that electronic banking offers the convenience of conducting most of banking transactions at a time that suits clients. Consequently commercial banks must enhance further development in their e-banking facilities to have competitive advantage over other competitors. Core competencies are described as capabilities that are crucial for a business in achieving competitive advantage. In initiating the analysis of core competencies is in recognising that competition between businesses is a race for competence mastery as it is for market position and market power. Senior management cannot focus on all activities of a business and the competencies required executing them. So it is for management to focus attention on competencies that really contribute to competitive advantage.

Despite electronic commerce acquiring a phenomenon appeal; its future development, to a large extent, is hindered by the deficiency of pertinent payment systems. Even, Bill Gates (2008) highlighted that “banking is essential, commercial banks are not”. This quotation means that the conventional bank branch is breaking down because it is unsustainable in order to be surrogated by electronic banking which is far appealing to its new users. As most of business-to-consumer payments across the Internet are executed currently via credit cards, issues in relation to payment due, security measures, confidence problems and the demand for fresh payment systems distinctly comes forth from the existing situation, which is indicated by several researchers such as Lynch & Lundquist, (1996); Wayner, (1997); Laudon & Traver, (2002).

According to Aladwani (2001) different varieties of online banking are web-based banking wherever a customer can access his or her account(s) whilst he or she utilises the Internet; second form of online banking is wherever a bank customer utilises a modem to dial-up to a bank’s server to get at his or her bank account(s). The previous form of online banking is known as dial-up banking. A particular type of dial-up banking is known as an “Extranet”, a private network between a bank and its corporate customers. Dube et al (2009), Yibin (2003) and Diniz (1998) distinguished three operational models of internet banking that are presently used in the market place and these are: *Informational, Communicative and Transactional*. Informational can be described as the foremost degree of internet banking. Commonly most the banks accept that marketing of selective information about the bank’s products and services on a stand-alone server. The risk is very low as informational systems generally cause no harm between the server and the bank’s internal network.

Yibin (2003) states that communicative and simple transactional websites type of internet banking admit more or less interaction between the bank’s systems and the customer. The basic

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interaction is circumscribed to e-mail; account inquiry, loan application or static file updates (name and address). The basic framework however does not allow any funds transfers. Similarly, Advanced Transactional websites admit bank customers to electronically transmit funds to/from their accounts, pay off bills and carry additional banking transaction online. In a different study by Ibrahim et al, (2006), revealed six composite attributes of electronic service quality, including the provision of convenient/accurate electronic banking operations; the accessibility and dependability of service provision; good queue management; service personalization; the provision of amicable and sensitive customer service; and the provision of aimed customer service.

Perceived usefulness, security measures and secrecy are the main elements to online banking system (Qureshi et al, 2008). According to another study which was carried out by Amin, (2007), he indicated that perceived usefulness, perceived ease of use, perceived credibility and computer self efficacy are the factors that affected the adoption of internet banking. Prior research and empirical observation ascertained positive relationship between perceived ease of use and perceived usefulness as decisive factors about the usage of e-banking as indicated by Poon, (2008); Pikkarainen et al., (2004); Wang et al., (2003); Chau, (2001); Hong et al., (2001); Agarwal et al., (2000); Johnson and Marakas, (2000); Venkatesh and Davis, (1996). Hence an application perceived to be useful to be applied than some other is more in all probability to be acceptable by users.

### **Research Methodology**

In view of the nature of the problem at hand, a quantitative analysis of the data was deemed necessary as it enabled the researcher to the extent to which e-banking affects the operations of banking institutions and the economy as a whole. The study adopted a descriptive research design, which is a process of collecting data in order to answer questions concerning the current status of the subjects in the study. Thus a descriptive study determines and reports the way things are. The main thrust of the study was quantitative although some qualitative approaches were used to gain a better understanding and possibly enable a more insightful interpretation of the quantitative study.

### **Research Population and Sample**

The study focused on registered banking institutions in Zimbabwe and drew a sample of three (3) leading players in electronic banking namely CABS, CBZ and Steward Bank through purposive sampling.

### **Data Collection Instruments**

The study used both primary and secondary data sources in gathering data for analysis. The primary data was gathered using questionnaires comprising both open and close-ended questions. Primary data collection involved self-administration of questionnaires and the researcher dropped the questionnaires at the physical workplaces of the respondents and some were sent through the e-mail.

Secondary data, in the form of audited financial statements was used since profitability was taken as the measure of financial performance in banks. The secondary data provided a very reliable source of information needed by the researcher to investigate the phenomenon.

### **Method of Data Analysis**

Linear regression was employed to establish the strength of statistical relationship between different variables whose data was obtained from the personal interview. The general regression equation takes the form  $\gamma_i = \alpha + \beta x_i + e_i$ ; where  $\alpha$  is an autonomous component;  $\beta$  is the rate of change of  $\gamma$  with respect to  $x$ ;  $e_i$  represents the error term, that is, the term that captures all other inputs (independent variables) other than  $x$  that influence  $\gamma$ , which are not currently under investigation.  $\gamma$  is the response being tested against; and  $x$  is the variable being considered for test.

Contribution from e-banking facilities ( $y$ ) was regressed against the bank's sales volume and sales value. Number of EFTPOS transactions represented the sales volume ( $x_1$ ) and the total revenue from EFTPOS represented sales value ( $x_2$ ). However, even though regression dealt with the dependence of Contribution on number of transactions and total revenue, it did not necessarily imply causation.

### **Findings of the Study**

There have been a number of benefits that have accrued to the economy as a result of adopting the electronic payment system. These include inter-alia:

### **Qualitative Analysis**

Efficient settlement of transactions through the reduction of transaction time and reduction in queues at the banking halls. This has left employees with more time to put into productive use to enhance economic growth and development. Queries are also easy to trace and adjust accordingly because enquiries are now being raised and settled through electronic mails. The system also brings in more convenience, more service options to clients, such as purchase of airtime, bill payments, balance enquiry, mini statement requests, internal transfers and transfers to other banks. All these services can be accessed via the mobile phone devices for example, through CBZ Touch for CBZ Bank, Mobile Moola for FBC Bank and TEXTACASH for CABS.

The adoption of e-payment has also stimulated economic activity through increased sales. Vending and catering purchases are often dictated by the amount of loose balances we have in pockets, but with the introduction of e-payment, the value of the card is always available. There has also been an extension of banking hours since transactions continue to be effected even well after banks have closed doors and on weekends and public holidays. The need to access cash in supermarkets and other retail shops in the form of the cashback facility has also led to more purchases being made by individuals because in most instances the amount of cashback is equivalent to the value

of goods purchased. The Reserved Bank of Zimbabwe Governor Dr. J Mangudya echoed the same sentiments in his Monetary Policy Statement for the fourth quarter of 2016.

Reduction in cash circulation has also reduced cash related crimes such as armed robberies, embezzlement of funds and pick-pocketing. Corporations have also enjoyed a reduction in cash handling costs because most of their transactions reflect directly in their bank accounts and this has reduced the chances of loss of revenue through the above mentioned cash related crimes. There has also been an improvement in hygiene because the use of plastic money has eliminated bacterial spread through handling of notes and coins from one individual to another. This is in line with the findings in the study by Adu (2016) who noted that cash related crimes dropped significantly in Nigeria after the adoption of a cashless policy.

Banks have also enjoyed efficiency through electronic payment processing, reduced cost of operations and increased banking penetration. Reduced paper work in the e-payment system has brought in efficiency because anomalies are easily traceable using computer systems, where e-mails are used to raise queries and evidence is provided by sending in scanned documents and the charge backs to correct the errors are also done electronically. Operational costs have also fallen because manpower is being replaced by machines so there are no more overtime burdens, reduced labour force and greater degree of accuracy. The ability to bring banking services conveniently to clients' doorsteps has increased banking penetration into the previously unbanked individuals and corporations alike. The finding concurs with that of Dube (2009) that focused on the adoption and use of Internet banking in Zimbabwe.

The benefits of e-banking also stretch to the government through increased tax collection, greater financial inclusion, improved regulatory services and increased economic development. The formalisation of systems in the e-banking structures allows for the government to broaden its tax base by getting on board previously marginalised informal business that were not contributing to the national fiscus. This has been achieved by the installation of fiscal machines on points-of-sale to automate the taxation system. The agenda of financial inclusion is also met by the increased outreach into remote areas where a huge percentage of the rural population has been marginalised. The adoption of mobile money transfers, such as ecocash, telecash and one wallet has helped in this regard.

**Quantitative Analysis**

Dependent Variable: CONTRIBUTION

Method: Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SALES_VALUE	0.002203	0.003876	0.568397	0.3705
SALES_VOLUME	17.22404	0.153445	112.2487	0.0001
R-squared	0.792596	Mean dependent var		222996.7
Adjusted R-squared	0.792255	S.D. dependent var		161338.3
S.E. of regression	13921.36	Akaike info criterion		21.93110
Sum squared resid	3.51E+10	Schwarz criterion		21.96618
Log likelihood	-2004.696	Hannan-Quinn criter.		21.94532
Durbin-Watson stat	1.821637			

The regression equation has been estimated as:

$$\text{Contribution} = 0.002203 \text{ Sales Value} + 17.22404 \text{ Sales Volume}$$

The two explanatory variables, i.e. Sales value and Sales volume, have regression coefficients of 0.002203 and 17.22404 respectively. The results show that Sales value is insignificant as a predictor of Contribution and hence Bank profitability, where a 1% change in Sales value leads to 0.002203 change in Contribution units. On the other hand, Sales volume has been established as significant in explaining Contribution and hence Bank profitability. A 1% change in the number of transactions executed leads to approximately 17.22404 increase in Contribution units. Thus, it is more about the number of the transactions done than the value of those transactions, which improve banks' financial performance. This necessitates the need for e-banking facilities to increase the number of bank transactions, through improved access, unlimited business time, greater convenience, improved security and low transaction costs. The probability of Sales Value of 0.3705 shows that it is insignificant in the determination of Contribution, but instead it is the Sales Volume that matters the most. Daniel (2002) also concluded that the frequency of sales and not the value of the transaction has a significant bearing on the success of Internet marketing.

The value of 1.821637 Durbin Watson test statistic confirms the absence of serial correlation in the data. An R<sup>2</sup> co-efficient of 0.792596 obtained from the estimated model means that the independent variables explained 79.26% variability in the dependent variable, Contribution. The



remaining 20.74% can be explained by other factors that were not captured in this model which may include among others: bank size, branch network, capital adequacy and regulation.

Null Hypothesis: Unit root (common unit root process)

Series: CONTRIBUTION

Method	Statistic	Prob.*
	-	
	2.5373	0.005
Levin, Lin & Chu t*	3	6

\*\* Probabilities are computed assuming asymptotic normality

Intermediate results on CONTRIBUTION

Cross section	2nd Stage Coefficient t	Variance of Reg	HAC of Dep.	Max Lag	Bandwidth	Obs
1	-1.03204	3.E+10	2.E+10	1	3.0	58
2	-1.03204	3.E+10	2.E+10	1	3.0	58
3	-1.03204	3.E+10	2.E+10	1	3.0	58

  

	Coefficient t	SE Reg	mu*	sig*	Obs
Pooled	-1.03204	1.000	-0.528	0.813	174

The study utilised the Levin, Lin & Chu unit root test to check whether the data used in the study is stationary or not. The table above shows that the data used was stationary therefore; the conclusions to be drawn are not based on statistically spurious relationships.

### **Conclusions**

By and large, the use of e-banking stimulates economic growth and development through convenience, by removing administrative resources required by invoices, cheques and cash; immediacy, where credit cards enable instant purchases without delays and improves cashflow management. Growth opportunities are also presented since there are many payment channels and increased customer base and hence, more customers mean more revenue. The e-banking platform also gives financial institutions competitive advantages in service delivery. This competition helps bring about efficiency in the sector in a bid to gain the edge, thus, bank charges and commissions are lowered and service delivery and service recovery are improved.

### **Recommendations**

The government and financial institutions should adopt these suggestions in order to achieve desired results like many other developed and developing countries.

Authorities should help provide infrastructure and systems support since the setting up of e-banking facilities is very capital intensive. Financial institutions are also encouraged to collaborate and finance some of the infrastructures needed for the implementation of e-banking, so as to share costs and reduce the initial set up costs.

There is need for government to provide uninterrupted power supply and adequate communication link to support the execution of business. Financial institutions however, need alternative back-up arrangement to power, such as a standby generator.

The central bank, Reserve Bank of Zimbabwe (RBZ) should incentivise the public to adopt and use e-banking facilities by lowering the costs of using this platform. Bank charges and commissions need to be very for the public to see the benefits of e-banking.

There is need to create awareness on the benefits derivable from e-banking, both on business improvement and economic development. The regulatory authorities need to educate the masses of these benefits through outreach programs, radio and television adverts and business seminars.

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