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Information and Communication Technology Products: Their Gains and Pains on Nigerian Banking System

Sanni, M.R. - Department of Accountancy, The Federal Polytechnic, Ilaro, Ogun State
E-mail: babasanni@yahoo.com
Phone: 08035629290.

Abstract

Year 2006 witnessed a banking revolution in Nigeria as the minimum paid up share capital of Nigerian banks was increased from N2 billion to N25 billion. With it came consolidation and stiff competition among the emerging "mega" banks resulting into investments in ICT. This paper considers the positive as well as the negative sides of some ICT products like ATM, e - banking, e-payment and e-commerce among others. It compares the investment by banks in ICT in the last three-years with the volume and value of banking transactions occasioned by such investment. It also considers savings from forgeries and frauds and concludes that the gains from ICT banking products far outweigh their shortcomings.

Keywords*:* E– banking, E– commerce, ICT, ATM

Introduction

The role that Information and Communication Technology (ICT) plays in enhancing economic, business and operational activities of both private and public institutions cannot be over emphasized. Even gadgets of ICT are now common features in our homes such as computers, GSM, DSTV connections, Internet and satellite connections, with back up interface devices, operational manuals and software's (systems and applications) to make usage easy. The use of ICT has pervaded all facets of business activities such as Agriculture, Health, Education, Economic, Tourism, Medical and Management concerns (Idowu, 2005). ICT has made mundane, technical, difficult, computational

jobs more interesting, less cumbersome and at times even attractive. ICT as we know it is the convergence of computers with telecommunication link. So, it is the marriage of two important technological devices to affect the world of education, business and leisure.
The genesis of ICT started from counting machine and telephone, to the present day of computers, electronic networking, satellite dishes and Internet connections. This is a feat made possible by the advancement in telecommunication linkage via silicon chips, thus making geographical locations, distance and territorial boundaries irrelevant as long as there is constant power supply at the sending and receiving ends (Idowu, 2005).

A banking revolution took place in Nigerian with the increase in the paid up capital of banks from N2 billion to N25 billion effective from 1st of January 2006. This led to consolidation of the existing 89 banks to 25 (now 24) with the liquidation of weak banks that could not find merger partners. The revolution brought about sweeping changes to banking business in Nigeria with aggressive competition among the banks. Each of the surviving "mega" banks came up with new products, repackaged old ones and came up with efficient service delivery. This efficient service delivery was made possible through investment in ICT.

To what extent has investment in ICT benefited both the bank and customers? What are the gains from ICT and what are the shortcomings? Finding answers to these and other similar questions motivated this work. The rest of the paper is divided into four sections. Section two is on review of related literature. Section three examines ICT banking products like the Automated Teller Machine (ATM), e-commerce and m-commerce, drawing out their advantages and shortcomings to both the banks and their customers. Section four examines the investment in ICT in the last three years and its associated benefits while section five summaries and concludes it.

Review of Related Literature

A really big issue of today is globalization, which stands for worldwide processes, activities and institutions. It involves world markets, world finance, world communications etc. In recent times, the world is seen not only as a global village, but a neighborhood due to advances in new technologies – ICT.

Information and Communication Technology (ICT) has been described as the field of expertise that combines informal technology (computers) and telecommunication networks (the Internet) to provide sophisticated

applications that span the global, allowing people and computers to interact over distances to achieve common goals (Oluya and Olu - Braimoh, 2008). ICT is a technology such as computers, software peripherals and Internet connections infrastructure required to support information processing and communication functions (UNDP, 2001). Sesan (2001) defines ICT as the convergence of micro electronics, computing and telecommunications which has become a global phenomenon of great importance and concern in all spheres of human endeavors, spanning across education, governance, business, market, labour, productivity, agriculture, trade, commerce and others.

Aside the unquantifiable man-hours lost in queuing up in banking halls, is the cost of adopting modern tools and processes in delivering banking services (Ekemezie and Ezeorah, 2005). Changing the way financial services are used in international trade, local trade and individual needs, according to Jain (1966), electronic finance is forcing standardization, adding speed and reducing costs. These changes can help developing countries (Nigeria and others) improve their international competitiveness.

For any bank not to be left behind in the race to achieve multi-branch banking and deliver faster, with more innovative services, it must have to install the modern systems available. These include the banking software, computers with high-speed processors and large memories and the right personnel. For most banks, the right mix has not been achieved, and that is why return on investment has not been as high as many expected (Ekemezie and Ezeorah, 2005). According to Odubele (2003), flex-cube is gradually penetrating banking applications, owing to the need to have different delivering channels for the customers and also making banking business convenient to them. With flex-cube, one can have different delivering channels such as ATMs, Point of Sale (POS), Tele-banking, Internet banking etc. Arise (2004), in his statistics of cash dispensers world wide showed that there are about 900,000 ATM locations, 32.8 million merchants' acceptance locations in over 30,000 financial institutions across six continents.

ICT Banking Products

The ATM (Automated Teller Machine)

An Automated Teller Machine is a computerized telecommunication device that provides the customers of a financial institution with access to financial transactions in a public place without the need for human clerks or bank tellers (Babalola and Adebiyi, 2008). On most modern ATMs, inserting

plastic ATM card with magnetic stripe that contains a unique card number and some security information identifies the customer. Security is provided by the customer entering a Personal Identification Number (PIN). When using ATM, customers can access their bank accounts in order to make withdrawals and check their account balances as well as purchasing mobile cell phone prepaid credit. ATMs are known by various casual terms like Automated Banking Machine, Money Machine, Bank Machine, Hole-in wall and Cash points in various countries.

Among all channels of e banking in Nigeria, ATM emerges as the most popular with 96% awareness (Abefe-Balogun and Nwanpka, 2008). Adeloye (2008) reported that there was massive increase in the development of ATMs from 425 in year 2005 to 3017 in 2007 and 5894 as at July 2008 through which 65,059,870 transactions were made.

Some of the benefits of ATM as enumerated by Ekemezie and Ezeorah, (2005) are as follow:

- Banks offer and manage profitable banking services without the presence of the bank's personnel (overtime costs are saved).
- Maintains a bank account at very low operational costs.
- Provides savings via its ubiquitous banking services.
- Provides savings from the cost of moving and storing cash, which substantially reduce overhead costs, thereby yielding profits to the banks
- Improves customer service delivery.
- Creates avenues for new income, in terms of fees and charges on their use, for banks.
- Enables Nigerians to truly participate in electronic commerce, in which case, transactions can be initiated and concluded instantly for goods ordered from Europe, America, Asia, etc, and shipped vis DHL, FedEx, UPS, etc, without necessarily incurring the cost of a travel ticket.
- Eliminates cash-induced robbery in our society, since there is no need for anyone to carry loads of cash either to or from any country as such funds can always be kept in the smart card.

The use of ATMs allows customers access to cash 24 hours a day and seven days a week and saves valuable man-hours for the customer and the banks

(Okonedo, 2009). It likewise allows every card holder to access cash from any city or state in the country thus reducing the need to carry cash while traveling and as well as reducing the risk of being robbed.

The Problems Facing ATM in Nigeria

The problems like transmission of card details, account numbers and so on have been frequent since the inception of the cards. This point was buttressed by Ajumobi (2008) when he used the example of an applicant who bought her West African Examinations Council (WAEC) card to check for her results online but ended up paying extra fees as a result of hitches arising from this form of payment. Matthew (2008) complained about the exorbitant charges customers are forced to pay for withdrawals made. He argued that if he is to pay N50 for withdrawing N20, 000, he should pay less for withdrawing N3, 000 instead of the flat rate being charged. It is very important for customers to get educated on how to use ATM. Victor (2008) narrated his experience at observing customers having problem in using the machine. When the money in the ATM is exhausted and there are no replacements, hitches may be inevitable.

The earlier fears expressed at the inception of the ATM appear to be non-existent. They are:

- Absence of telephones to the larger popular. Most people now have telephone sets.
- Inconsistent supply of electricity either as source of power or for recharging the battery-powered ones. Most of the rural areas, where urban dweller can make withdrawals while at their various homes, have no electricity supply. No incidence of power failure on the ATM has ever been observed by the author since the inception of the machine.
- Absence of Electronic Fund Transfer (EFT) and processing network that would facilitate transaction routing between ATMs and banks.
- High telecommunications tariffs and poor telecom infrastructure. The high cost has been passed on to the customers.

E – Commerce.

Electronic commerce is a major tool in business transactions today. Electronic commerce is the buying and selling of goods and services over the Internet, networks and other digital technologies (Laudon and Laudon, 2000, Toluwase, 2001). Its other synonyms include e – commerce, electronic

business, e – business, Internet commerce, and I – commerce (Ojala, 1999, Toluwase, 2001). Electronic Data Interchange (EDI) started on private networks in the 1960s and was solely used by banks. The use of Internet was started mainly and used by academic researchers and under the control of the National Science Foundation (NSF) until 1991 when the NSF lifted the restrictions to accommodate commercial use and the release of Netscape browser. In 1994, the World Wide Web (WWW) became a medium of information, communications and trade (Toluwase, 2001). The e – commerce has since changed business and social environment and many companies are now going beyond e – commerce by converting their firms to e – business through the application of information technology in all spheres of business in order to improve production and marketing efficiency.

Internet has facilitated the growth of corporations beyond traditional city, state or national market borders. Global business models on Internet are run as business- to –business, business – to – consumer, government - to – businesses, government – to – public sector, government – to – government, consumer – to – consumer, and business – to – suppliers and consumers (Fellenstein and Wood, 2000). It is not confined to buying and selling of goods and services directly for revenue. It does generate demand for goods and services, and do facilitate communications between business partners (Hashmi and Damanpour, 2000).

The Gains of E – Commerce

Prior to Internet, geography, national barriers and inadequate means of communication have limited international businesses, but due to revolutionary changes as a result of economic integration and globalization trend, international businesses through Internet and commerce have grown.

The rapid growth of e – commerce and Internet businesses has affected traditional marketing intermediaries who are forced, based on the information weapon of the consumers, to provide major adjustments to their marketing mix variables in order to survive. The Internet has had a tremendous impact on industries such as entertainment/music, travel, financial serves and computer industries (Toluwase, 2001).

Web has also changed the nature of competition in the financial service industry. It was reported that the Bank of America had some 2 million customers who have signed up its online services, which include checking of

account balances, investing on-line and application for loans (Trombly, 2000). The traditional marketing intermediaries stand to lose unless they make major adjustments fast.

Global e – commerce allows business to be run anytime any day as any person who so wishes can access the Internet as a potential customer. E-Commerce is operated from Yahoo.com to eBay.com and one of its reported successes is the Ingram Micro, world's largest business – to – business sales company. They once listed 225, 000 products from 1,500 manufacturers throughout the world. The company has over 140,000 reseller customers in 30 countries (Hashmi and Damanpour, 2000, Toluwase, 2001).

The e – business has facilitated the growth in the use of electronic cash (e – cash). This is one of the new innovations in the area of electronic payment systems. The use of Netcash is a ready example. Most goods will be delivered electronically, for instance, computer software, musical CDs, journal articles and books. When goods are electronically delivered, it eliminates the packing and forwarding charges, making those goods cheaper.

The Constraints in the Path of E – Commerce in Nigeria

When a company is seeking to capitalize and exploit the opportunities offered by e – business by globalizing their web site, one of the constraints often faced, as identified by Toluwase (2001), is the suitability of products or services to the world economy. In the case of Nigeria, the quality, nature and the cost of the intended products must be thoroughly considered before selling online and most of Nigeria's products are raw materials and semi-finished goods.

There is also the need to consider product differentiation and the decision to customize product and advertising in each country. This is a constraint in the use of e-business. Another limiting factor in the use of e-business, which is very relevant in Nigeria's case, is the issue of distribution channels and the consideration of the ability of companies to support global expansion.

Other constraints identified by Toluwase (2001) are the issue of international trade laws, security risks like data manipulation, lack of uniformity of technical standards and prohibitive search costs.

M – Commerce

Mobile commerce (M-commerce) activities transcend major national boundaries, as it is a global phenomenon. All countries of the world and major economic players are directly involved. Moving business online solves a number of problems such as: geographical fragmentation, inefficient labour and information interaction. The primary goal is that people who are scattered all over the world can do business with ease and at minimum cost using a combination of the old telephone/fax telecommunications system with the new Internet technology (Ayo, Olugbara, Ikhu-Omoregbe, & Atayero, 2004). This new direction of technology gave birth to what is referred to as M – commerce.

M – commerce (1,2,3,4), which is the process of conducting commercial transactions using mobile telecommunication networks, information communication systems and mobile devices promises to deliver electronic commerce capabilities directly to consumers anywhere, through the wireless technology. M-commerce is online financial transaction such as shipping of goods and services or electronic transfer of fund, using the mobile device of the user. It can be used to connect to internet from any place, conduct online transactions, make purchases, trade stock, send e – mail, perform online enquiry, conduct market research, place advertisements and so on.

The Gains of M- Commerce

The numerous application areas of M – commerce include: M-payment, M-inventory management, M-Distance education, M-Workplace, M- Auction, M-Audit, M-Telemedicine, M-Advertisement, M- Agriculture, M-Police, M-Banking, M-Library, M-Shipping, M-Reservation, M-Government and so on (Ayo et al 2004).

In Nigeria, the number of users of the mobile communication devices is far more than the PC-based users. Hence, M-commerce appears more acceptable because of its availability and cost effectiveness coupled with the advent of telephone and Internet banking in Nigeria, which can serve as backup.

The Constraints

The greatest problem facing M-commerce is that of fraud, security and confidentiality with Nigeria being the greatest culprit. This has brought about the concept called “Nigeria Scam” (Sierp, 2002). It has been observed that

regardless of the country or countries involved in the frauds, even countries located outside Africa, the fraudsters are Nigerians (White, 2003).

Furthermore, a serious barrier to online transactions is lack of familiarity with items to procure. There is the need for consumers to physically see and thoroughly examine the items before procurement. The full perspective of an item cannot be gained online and this is in many ways restricting purchasing. However, there are many online transactions such as "mobile enquiry" and "mobile notification" that do not involve payment. This hindrance therefore, cannot diminish the good image of M-commerce. To help drive M-commerce, four leading European mobile phone companies: T-mobile, Orange, Vadafone and Telefonica movies have teamed up to establish the Mobile Payment Service Association that aims to create an interoperable standard for payments using a mobile phone (Kamlibrary, 2003). The aim of the association is to provide a secure platform to drive more customers, content providers, banks and merchants to stimulate M- commerce growth (Ayo, Olugbara, Ikhu-Omoregbe and Atayero 2004).

Investment in ICT, Does it Worth it?

Though the total amount spent by the 25 (now 24) post consolidation "mega" banks on ICT is not known at the time of writing this paper, the amount spent by one of them can be used to visualize the total amount spent by them. First Bank Nigeria Plc went to the market in May 2007 to raise N96 billion (Net) for expansion purposes. On Strategic Business Development (ATM Rollout, Call centers, Other Electronic Banking Service Channels), the bank was to spend N10.3 billion (or 10.7% of the net proceed). On expansion and upgrading of IT infrastructure – Hardware, Data warehousing and other customer relationship management applications – it proposed to spend N6.4 billion (6.7%). In all, the bank proposed to spend N16.9 billion (or 17.4%) on ICT related facilities. The question to ask is: In spite of the shortcomings of ICT banking products, what is the effect of such huge investment on the Nigerian economy?

(a) Savings in frauds and forgeries in Nigerian banks.

A year after the consolidation exercise in the banking sector, the Central Bank of Nigeria's (CBN) report on fraud and forgery in Nigerian banks is positive. According to CBN (2006), the number of reported cases of attempted or successful frauds and/or forgeries in the banking industry declined in 2006 (Table 1).

There were a total of 1,193 reported cases of attempted frauds and forgeries involving N4.6 billion, US$1.8 million and £14,399.7 in 2006 compared with 1,229 reported cases involving N10.4 billion, US$1.4 million, £35,840.0 and €116, 310.0 in 2005.

Out of the reported cases in 2006, 612 cases were successfully executed by the perpetrators and resulted in losses to the banks amounting to N2.6 billion, US$1.3 million and £14,399.7 million, compared with N5.5 billion, US$728,347.0, £30,085.0 and €10, 255.0 in 2005 (Table 2). The amounts due to computer related crimes were not however separately indicated.

(b) Increase in the volume and value of banking transactions.
The electronic payment market in Nigeria deepened during the year under review (2006) with the introduction of new products, such as loyalty cards, naira-dominated credit cards and other on-line products (CBN, 2006). The development enhanced the efficiency of funds intermediation in the banking system. The volume and value of electronic card-based transactions in 2006 were 13.0 million and N86.2 billion, respectively. However, activities through off-line, point-of-sale terminals (POS) declined during the year due to public preference for on-line transactions. The volume and value of transactions in the foreign currency-dominated segment increased substantially by 240.4 and 237.8 per cent, respectively owing to increased public awareness. Similarly, the ATM segment recorded significant patronage as its volume and value of transactions increased, relative to the 2005 levels, by 247.8 and 265.3 per cent respectively to 12.1 million and N63.2 billion. The substantial increase in activities in this segment reflected the growing public confidence and access to ATMs, which increased to 776 from 425 in 2005. ATM transactions accounted for 93.1 and 73.4 per cent in volume and value of total card-based transactions, respectively in 2006.

Internet and mobile phone banking has also become a feature of the Nigerian banking payments system. The volume and value of web-enabled transactions and mobile banking transactions through the GSM were 222,210 and N3.0 billion and 40,733 and N97.5 million, respectively.

Available statistics reveal that the use of electronic payments was sustained in 2008, reflecting the aggressive marketing strategy of the banks and increased public awareness. The data on various e – payment channels for the first half of 2008 indicated that the ATM remained the most patronized;

accounting for 87.0 percent of the total, while POS terminal was the least with 2.5 percent (BusinessDay, 2009). In terms of volume and value, e-payment transactions increased by 306.8 and 65.5 percent to 21,860,193 and N365.9 billion respectively, over the figures in the corresponding period of 2007 (Table 3).

For ATM, the volume and value of transactions rose by 297.8 and 247.1 percent to 18,954,942 and N143.3 billion respectively over the levels in the corresponding period in 2007. The development was attributed to the increased number of ATMs in the country, enhanced public awareness as well as the convenience of the system.

POS transactions in terms of volume and value increased significantly from 91,211 and N946.2 million in June 2007 to 535,376 and N6.8 billion, respectively. The increase was accounted for largely by the widespread use of debit cards. For Mobile Payments (m-payments), the volume and value rose by 974.9 and 368.4 percent to 1,576,207 and N164.8 million over the levels at the end of June 2007.

The use of internet services for transactions increased by 85.5 and 154.3 percent to 684,907 and N7.6 billion respectively, compared with 119.8 and 50.9 percent at the end of June 2007. The development was attributable to the growing number of airlines and merchants that accept payments through their websites. However, transactions through Inter – bank transfers rose by 88.4 and 49.4 percent to 108,761 and N43, 422.8 billion, respectively, over the levels in corresponding period. The development was linked to the adoption of the Third Party Transfer mechanism of the CBN, Inter- Bank Funds Transfer System (CIFTS) for Bureau -de –Change deposit for foreign exchange purchases.

Summary, Conclusions and Recommendations

The paper looked at ICT, appraising its banking products like e-banking, e-commerce, e-payment and ATM. It looked at investments in ICT in the last one year, assessed its contributions in the area of reduction in frauds and forgeries in the Nigerian banks and the increases in the volume and value of transactions in the banks occasioned by such investment. On the whole, it was found that the gains in ICT to the Nigerian economy far outweigh their shortcomings.

The following recommendations are put forward for better performance.

- On ATM, hitches experienced due to system failures should be totally eradicated or reduced to the barest level.
- On e-commerce, users must be careful not to fall victims of Internet frauds. In this case, all necessary precautionary measures must be taken, including seeking experts' opinion when in doubt.
- Governments and the banks still have a lot to do in educating people on the benefits of ICT facilities and how to enjoy them.
- The incidence of frauds and forgeries in banks is still high relatively. Urgent steps should be taken to reduce it to the barest minimum.

References

Abefe-Balogun, B and Nwankpa, N.N (2008). "The impacts of e-banking in National development." A Paper Presented at the 6th National Conference of the School of Management Studies, The Federal Polytechnic, Ilaro, Ogun State, November 10-14.

Adeloye, L (2008). "E-banking as new frontier for banks." *Sunday Punch* September 14, P. 35.

Ajumobi, K (2008). "E-banking: Pains, Gains." *Business Day*. Friday 10 – Sun 12, October, P 11.

Arise, A (2004): "Master Cards in the Hand of Nigerians: E- Business Perspective." *THISDAY*

Ayo, C. K, Olugbara, O. O, Ikhu-Omoregbe, N. A & Atayero, A. A (2004). A framework for M-Commerce implementation in Nigeria, *Journal of Computer Science and Its Applications.* An International Journal of the Nigeria Computer Society, Vol. 10, No 1, pp 21-29.

Babalola, J.B and Adebiyi, W.K (2008). "Popularizing the use of Automated Teller Machine for National Development." A paper presented at the 6th School of Management Studies, The Federal Polytechnic, Ilaro Conference, 10th – 14th, November, pp 2-3.

BusinessDay (2009). "E – Payment: Technology for Sustained Economic Growth." *Business Day.* Special Report, Wednesday June 17, pp 2, 15.

CBN (2006). *Central Bank of Nigeria, Annual report and Accounts for the year ended 31st December 2006*, Abuja, CBN, P 36.

Ekemezie, W. N and Ezeorah, E. U (2005). "System Integration: Towards ATM Networks Implementation in Nigeria." *Conference Proceedings* Vol 16, 8th International Conference of Nigeria Computer Society, pp 178 –184.

Fellenstein, G and Wood, R (2000). "Exploring I-Commerce. *Global E-Business and E-Society,* New Jersey: Prentice Hall, pp 243-261.

Hashmi, M.A and Damupour (2000). "The Role of Internet in Globalization Business Operations*." Journal of Research in Global Business, (Fall)* No 2 pp 111-118.

Idowu, A.A (2005). "ICT Embracement and Menace in New-wave Financial Intermediation, *The JOBMAS, Journal of Business and Management Studies*, The School of Business and Management Studies, The Federal Polytechnic, Ofa, Vol. 1, No 4, pp 7-16.

Jain, R (1996): Congestion Control in Computer Networks: Issues and Trends, *IEEE,* May, pp 24 – 30.

Kamlibrary (2003): From e to m in commerce, http://www.kamlibrary.com/library/articles/emcommerce.htm

Laudon, L and Laudon, J (2000): *Management Information Systems: Organization and Technology In the Networked Enterprise,* New Jersey, Prentice Hall, pp 183-192.

Matthew, O (2008): In: E-banking: Pains, gains by Ajumobi, Kemi, *BusinessDay Newspaper*, Friday 10 – Sun 12, October, P 11.

Odubele, J (2003): Using ICT to help organizations, *Daily Independent online, Daily Independent Newspapers,* January 6, http://www.dailyindependentonline.com

Ojala, M (1999): Information Professionals Meet e-Commerce, Online, September – October, pp 82 –88.

Okonedo, B (2009): Nigerians conduct 100m ATM, other transactions in 2008, *Businessday Newspaper*, Wednesday 14 January, p 49.

Oluya, S.I and Olu-Braimoh, H.M (2008): "Social Change & ICT in Nigeria: An overview of the gains and the strains." A paper presented at the 6th School of Management Studies, The Federal Polytechnic, Ilaro National Conference, 10th – 14th, November, pp 2-3.

Sesan, O.O (2001): Information and Communication Technology: Development Opportunities & the role of youth." ThisDay Newspaper, P 14

Sierp, G (2002): Nigeria – The 419 Coalition, http://www.potifos.com/fraud.

Toluwase, A (2001): Electronic business in Nigeria: Opportunities, prospects, constraints and dangers, Business and Management Journal, A quarterly publication of Michael Stevens Consulting, Vol 4, No 2, July-Sept, pp 11-17.

Trombly, M (2000): Bank of America Boasts 2M Online Customers, Computer World, March 13, P 6.

UNDP (2000): Information & Communication Technologies for Development. New York. (http://www.unde.org).

Victor, A (2008): In: E-banking: Pains, gains by Ajumobi, Kemi, BusinessDay Newspaper, Friday 10 – Sun 12, October, P 11.

White, P.J (2003): Credit card scams, http://www.peterwhitecycles.com/scams.htm.

Table 1: Attempted Frauds and Forgeries in Nigerian Banks (2005 and 2006).

	Reported Cases	Amounts involved N	US$	£	€
2005	1,229	10.4 billion	1.4 million	35,840.00	116,310.00
2006	1,193	4.6 billion	1.8 million	14,399.70	-

Source: Prepared by the author.

Table 2: Losses to Frauds and Forgeries in Nigerian Banks (2005 and 2006).

	N	US$	£	€
2005	5.5 billion	728,347.00	30, 0850.00	10,225.00
2006	2.6 billion	1.3 billion	14,399.70	-

Source: Prepared by the author.

Table 3: The Volume and Value of Electronic Payments in Nigeria, 2007 – 2008.

Channels of transactions	JUNE 2007		JUNE 2008		% Change	
	Volume	Value N	Volume	Value N	Volume	Value
ATM	4,765,467	41.3b	18,954,942	143.3b	297.8	247.1
POS	91,211	946.2m	535,376	6.8b	487	619
WEB (Internet Services)	221,537	1.6b	684,907	7.6b	154.3	85.5
Mobile Payments	161,679	44.7m	1,576,207	164.8m	974.9	368.4
e – payments	-	-	21,860,193	365.9b	306.8	65.5
Inter – bank	-	-	108,761	43,422.8b	88.4	49.4

Sources: BusinessDay (2009).
Computations by the author.