

PoS Adoption and Usage

A Study on Lagos State

Lagos, 10 April 2015



Nigeria Inter-Bank Settlement System Plc

...improving the Nigeria Payments System

Contents

Page

A. Executive Summary

03

B. Background

08

C. Key Survey Findings

27

D. Case Studies

50

E. Benchmark Analysis

63

F. Recommendations

86

G. Appendix

91

A

Executive Summary



Executive Summary (1/4)

Overview

- This report provides insights from various stakeholders in the PoS value-chain as well as the perspectives of merchants and consumers on the adoption and usage of PoS in Nigeria
- The perspectives of merchants and consumers will be collected in phases, according to the roll-out of the cash policy around Nigeria i.e. 1: Lagos State, 2: Abia, Anambra, FCT, Kano, Oyo and Rivers States, 3: All other states in Nigeria
- The perspectives of merchants and consumers provided in this report are restricted to phase 1 only i.e. Lagos State

Background

- The Nigerian payments system has evolved over the past few decades
- By 2007, the payment system had transitioned from being cash-heavy to a bulk payer status, which is a combination of cash and some electronic instruments, mainly Automated Teller Machine (ATM)
- Post 2007, Nigeria continues to embark on measures to increase the use of electronic channels in its journey to a cash lite society with efficient payment systems
- In 2011, the CBN launched a cash policy to modernize Nigeria's payment system (in line with the country's vision 2020), reduce the cost of banking, foster economic growth and improve the effectiveness of monetary policy
- Between 2012 and 2014, the volume of transactions conducted via PoS increased by 183% CAGR suggesting significant adoption and usage of PoS

Executive Summary (2/4)

Key Findings for Lagos State Survey

Merchants

- 61.9% of merchants in Lagos provide PoS as an accepted payment method
- 49.3% of merchants have more than one PoS terminal deployed at their business
- 70.6% conduct between 1 and 20 transactions on their PoS daily while 1% conduct more than 100 transactions daily
- 93.6% of merchants cite PoS method as the preferred non-cash payment method
- 72% of merchants were offered their PoS terminals by banks, while only 3% were offered by PTSPs the remaining 25% of merchants directly requested PoS'
- 56.2% of merchants will continue to use PoS even if asked to pay for terminals
- Poor connectivity is cited as the main challenge to PoS usage

Consumers

- 90.2% of adults in Lagos are banked and 70.4% own debit/credit cards
- 35.8% cite card/PoS method as the preferred non-cash payment method
- However, only 11.5% claim to use their debit/credit cards daily, with 37.5% using it weekly and 5.9% never using their cards for payment
- Customers prefer to use cash for small transactions i.e. less than N1,000
- 68% of consumers use PoS cards at supermarkets while 0% do at open markets
- 68% of consumers are interested in contactless cards (NFC)
- The main recommendation to increase usage as identified by consumers is to increase awareness on the use of PoS
- 44.6% of non-users believe that improving security features on PoS could attract them to start using debit/credit cards

Executive Summary (3/4)

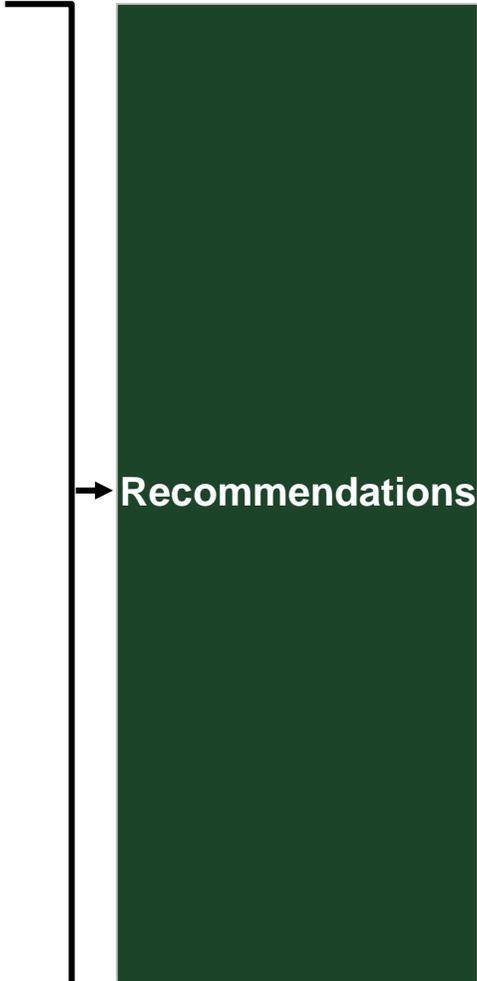
Case Studies

- In order to validate findings from secondary research and stakeholder discussions, two case studies were prepared to provide a basis for comparing the structured marketplace to the open/unstructured marketplace
- There are high levels of adoption of PoS in the structured marketplace i.e. malls and extremely low levels in the unstructured marketplace i.e. open markets
- There is an urgent need to increase awareness on PoS in open markets

Benchmark Analysis

- PoS adoption and usage in Nigeria has been compared with those across six countries Kenya, South Africa, Brazil, Mexico, Malaysia and Portugal
- The countries benchmarked differ in age of e-payment system, demography, regulation and incentive schemes to allow for wider fact deduction
- Nigeria, like Kenya remains under-leveraged in PoS adoption
- Nigeria has implemented clear regulation that guides the payment system, however, it appears to lack clear industry risk management guidelines which other countries such as Kenya, Brazil and Mexico are benefitting from

Executive Summary (4/4)



Recommendations

Adoption:

- To increase adoption, much more must be done to increase awareness on PoS' and its benefits, especially within open and/or informal markets
- Greater effort must also be made to communicate the improved security features of PoS to consumers in order to allay concerns about fraud and encourage confidence in the PoS system
- In addition to continuing efforts to make cash unattractive, the CBN should encourage banks to deploy more PoS terminals to lower value or more informal businesses; as well as review PTSP operations to solve problems of inadequate service currently being reported by banks and merchants

Usage:

- To deepen usage, technical features i.e. connectivity must be improved
- Focus must be on deploying PoS terminals to informal/open-air or unstructured markets where adoption and use are extremely low
- Improvements must be made to the timeframe for resolving PoS complaints

Operation:

- To improve the most significant challenge of connectivity, global sims are recommended along with LAN and more intelligent PoS terminals
- CBN should implement service standards for the industry, as well as enforce disciplinary measures for erring operators
- NIBSS should improve consistency of PoS data reports to banks to aid the reconciliation process, and also enhance the support framework to processors

Regulation:

- Published circulars on risk management guidelines for the industry need to be harmonized and communicated to all stakeholders to improve security and encourage further adoption and use
- Reversal of instituted policies must be minimized or completely eliminated, to limit the negative effect on stakeholder confidence and foster growth in use of PoS services

B

Background

B.1 The Evolution of the Nigerian Payment System

B.2 Cashless Initiative of the Central Bank of Nigeria

B.3 Point of Sales Adoption and Usage in Nigeria

B.4 About Lagos State



The Nigerian payments system has evolved from a sole reliance on traditional paper-based instruments to using electronic channels

In Nigeria, the modern payments system started out being completely paper-based with the use of banks notes, payment orders, and cheques. In **1996**, the payments system was modified to include card-based e-payment products, when the Central Bank of Nigeria (CBN) granted Allstates Trust Bank approval to introduce a closed system electronic purse called ESCA. This was followed by the introduction of 'paycard' by diamond bank in February **1997**. By **1999**, card based payment products assumed an open platform with authorization from the CBN for the floating of two card service companies – Smartcard Nigeria and Gemcard Nigeria Limited – by a consortium of over 20 banks.

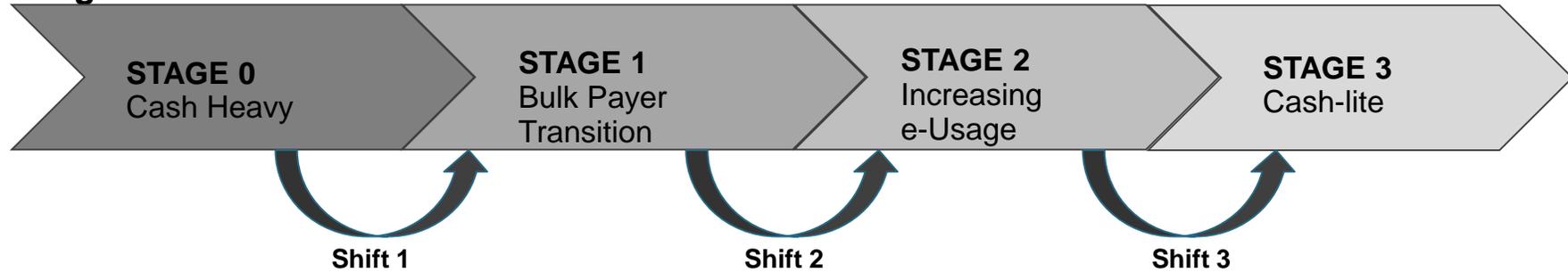
In **2003**, the CBN, in collaboration with the Bankers Committee, launched the first major initiative to modernize the payment system, granting approval to a number of banks to introduce international money transfer products, telephone banking and online banking via the internet on a limited scale. Today, virtually all banks have introduced electronic funds transfers (EFT), debit and credit cards, internet banking, mobile banking and deployed Automated Teller Machines (ATM).

The Nigerian payments system has further evolved with the introduction of the Payments System Vision 2020, launched in **2007** to facilitate a wider range of electronic payment methods such as PoS terminals, facilitated by a wider range of service providers.



Nigeria is transitioning from a cash-heavy to a cash-lite economy

Stages



● Nigeria

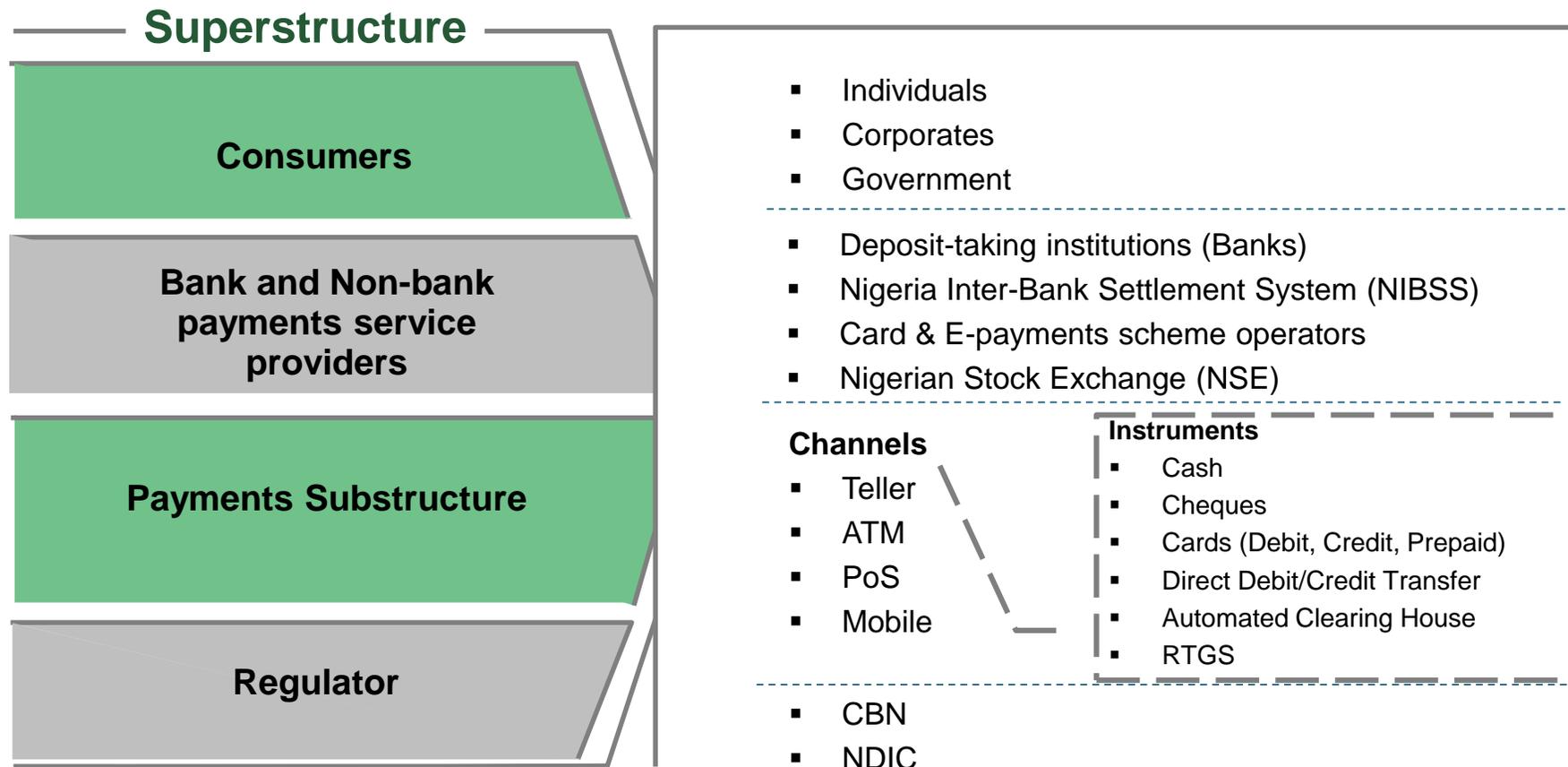
	STAGE 0 Cash Heavy	STAGE 1: 1996 - 2007 Bulk Payer Transition	STAGE 2: Post 2007 Increasing e-Usage	STAGE 3 Cash-lite
Main payment Instruments	Predominantly paper-based (typically cash, some cheques)	Mix of paper and electronic instruments (mainly cards used in ATMs, some online banking)	Mainly electronic (largely used for bill payments and remittances)	Predominantly electronic (use of mobile and/or card at point of sale through interconnected switches)
Requirements for shift to next level		Sufficient cash dispensing points	Ability of users to make inexpensive electronic payments via a computer, standing order, ATM	Predominant acceptance of electronic payments such as PoS and mobile phone
Comments		This stage involved conversion of bulk payments, such as salaries and government payments, to electronic payments. CBN also mandated electronic payment of all forms of taxes, and electronic payments of pensions by public organisations with more than 50 employees	The approach focused on promoting increase in card and PoS channels as is demonstrated by the push for greater PoS deployment and use	Few developing countries have broken through to this stage

While cash still remains the preferred mode of payment, other payment options have grown exponentially



- **Cheques:** there is an expected surge in the use of cheques. However, payment values on cheques must not exceed NGN10million
- **Bank drafts and other bank instruments:** these are used for big ticket transactions (not more than NGN10 million) that cannot be paid across the counter
- **ATM:** Automated Teller Machines are being used more frequently for making electronic payments such as utility bills, T.V subscriptions and GSM airtime purchases
- **NIBSS Funds Transfer:** an online platform enabling interbank fund transfers such as NEFT and NIBSS Instant Payment for individual amounts not exceeding NGN10million
- **RTGS :** Real Time Gross Settlements is used in big ticket transactions to transfer sums above NGN10million in favour of a single beneficiary
- **E- transfers:** these are basic banking transactions that can be done via the Internet on desktop computers, laptops and other electronic devices; accessible by subscription in various banks.
- **PoS Terminals:** PoS deployment is projected to hit 350,000 in 2014 from 120,191 in 2013, reflecting growing acceptance of PoS and electronic card payments
- **Mobile Money:** the volume of mobile payments increased by 27.90%, from 9,832,224 in 2013 to 12,575,523 by the first half of 2014

The payments system in Nigeria today is characterized by multiple players, channels and instruments



CBN works with NIBSS to provide shared services and infrastructure to participants in the Nigerian payment ecosystem



B

Background

B.1 The Evolution of the Nigerian Payment System

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B.3 Point of Sales Adoption and Usage in Nigeria

B.4 About Lagos State



CBN's Cash Policy is aimed at reducing and not eliminating the stock of paper currency circulating within the economy

An increasing number of countries have adopted policies to accelerate the use of electronic channels and reduce the use of cash. The motivation for these policies vary, but typically revolve around reducing the cost of banking, encouraging financial inclusion, increasing the amount of capital available for investment within the banking system, driving real economic growth and reducing tax evasion. The policy should also reduce the incidences of robberies (bank and others).

CBN announced its Cash Policy in 2011, and formally launched a pilot of the initiative in Lagos State in April 2012. The policy is intended to reduce the amount of cash in circulation within the economy amongst other key objectives including:

- To drive the development and modernization of the payment system in line with Nigeria's vision 2020 goal of being amongst the top 20 economies by the year 2020
- To reduce the cost of banking services and drive financial inclusion to greater reach
- To drive economic growth and improve the effectiveness of monetary policy in managing inflation
- To curb some of the negative consequences associated with the high usage of physical cash in the economy including the high cost of cash



Timeline for the implementation of the Cash Policy by CBN

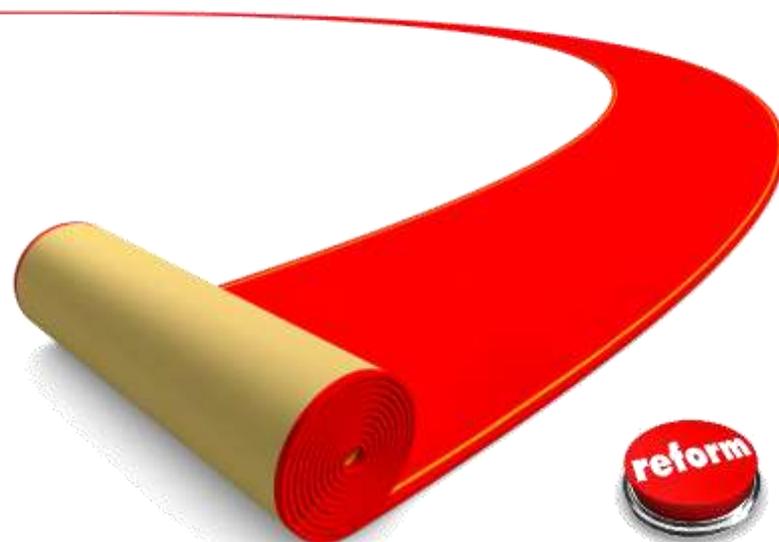
Dec 31 st , 2011	Jan - March 30 th , 2012	July 1 st , 2013	July 1 st , 2014
<ul style="list-style-type: none"> ▪ Only CIT licensed companies allowed to provide cash pick-up services ▪ Banks mandated to cease cash in transit lodgment services rendered to merchant-customers in Lagos state ▪ 3rd party cheques above NGN150,000 banned for over the counter encashment. Value for such cheques mandated to be received through the clearing house 	<ul style="list-style-type: none"> ▪ Service charge took effect as customers were expected to migrate to electronic channels ▪ The policy was run in Lagos state in January 2012 ▪ Charges started to apply from March 30th 2012 in Lagos 	<ul style="list-style-type: none"> ▪ Policy took effect in Rivers, Anambra, Abia, Kano, Ogun and the FCT ▪ Charges took effect from October 1st 2013 in Rivers, Abia, Anambra, Ogun, Kano and the FCT 	<ul style="list-style-type: none"> ▪ Policy took effect nationwide

CBN implemented measures and published clarifications on the cash policy in preparation for its national rollout

The cash policy took effect on the 1st of January, 2012 in Lagos State, following which it was initiated in Rivers, Anambra, Abia, Kano, Ogun and the Federal Capital Territory (FCT) on the 1st of July, 2013. The policy was implemented nationwide on July 1st, 2014.

A number of measures were taken by CBN to prepare for the roll out of the policy, including:

- **Cash Handling Charges:** all individuals and corporate entities are required by banks to pay for cash deposits and withdrawals in excess of stated thresholds (NGN500,000 and NGN3million, respectively). The fee ranges from 2% to 5% of the amount exceeding the threshold
- **Changes in how cash can be handled by banks:** effective 31 December 2011, only CBN licensed cash-in-transit companies are allowed to collect cash from clients in Lagos State, Federal Capital Territory (FCT), Port Harcourt, Kano and Aba
- **Implementation of PoS Guidelines:** the CBN's (PoS) guidelines, published in 2011, define minimum standards and requirements for the operation of PoS card acceptance services
- **Promoting awareness through market education and sensitisation:** this was done directly by the CBN and banks, through high profile messaging in all forms of media



B

Background

B.1 The Evolution of the Nigerian Payment System

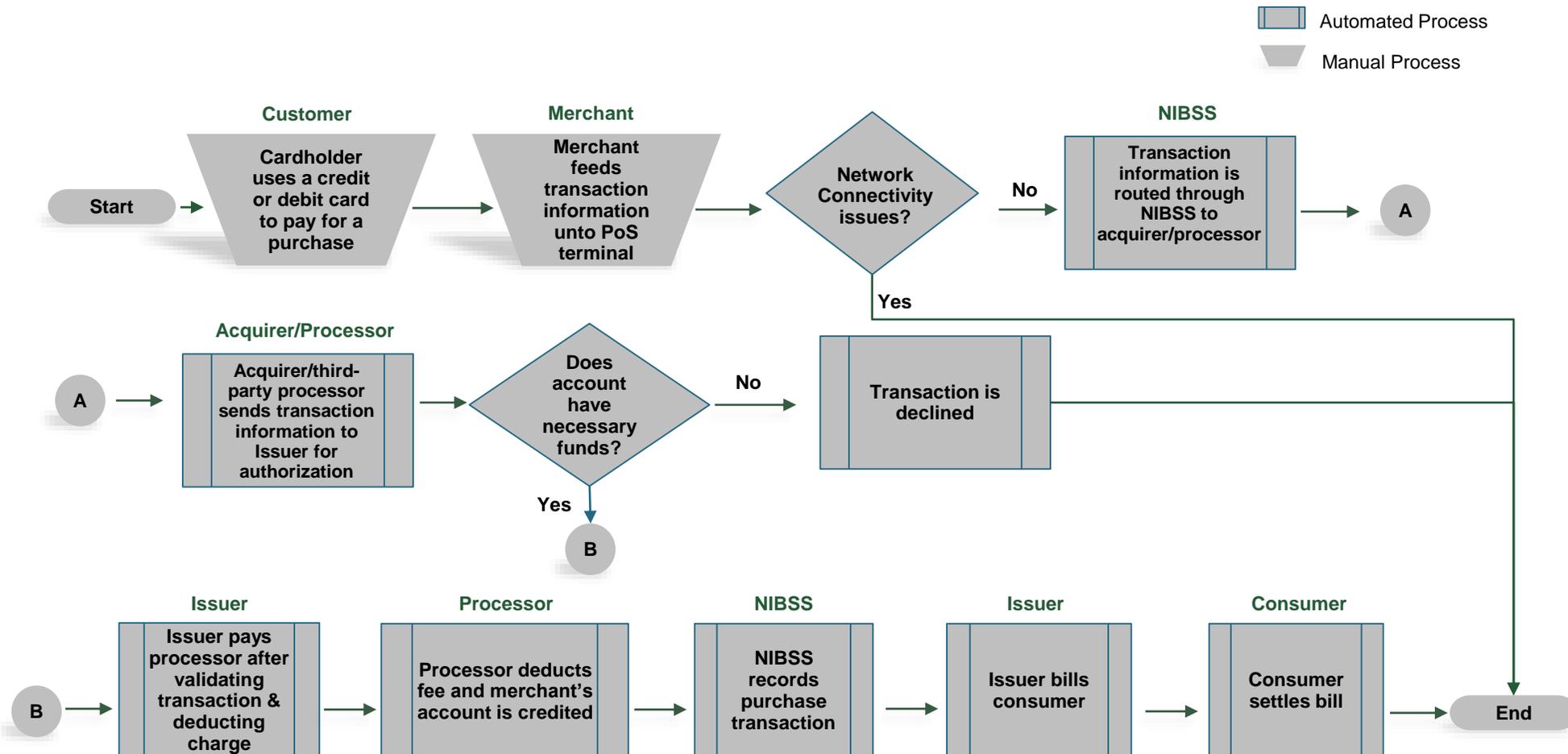
B.2 Cashless Initiative of the Central Bank of Nigeria

B.3 Point of Sales Adoption and Usage in Nigeria

B.4 About Lagos State



The card transaction process depicts the actions of each stakeholder in the PoS value chain



The CBN developed guidelines for the provision of adequate financial services through PoS in Nigeria

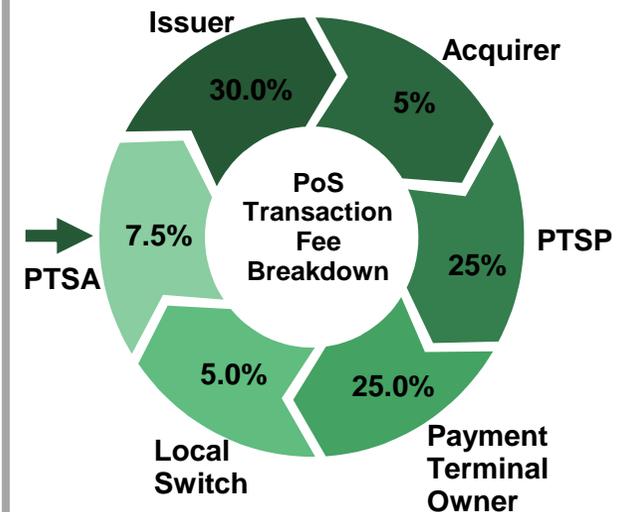
In addition to defining the roles and responsibilities for all stakeholders in the PoS value chain, the CBN's guidelines also outlines minimum standards for service provision and fees/charges by which all service providers must abide.

Minimum Standards

- All industry stakeholders who process and/or store cardholder information are to ensure their terminals, applications and processing systems comply with the minimum requirements defined in Standards and Best Practices
- All terminals, applications and processing systems, should comply with standards specified by the various card schemes. Each vendor must provide valid certificates showing compliance with these standards, and must regularly review status of all terminals to ensure compliance as standards change
- There will be continuous review and recertification of compliance with these and other global industry standards from time to time

Fees and Charges

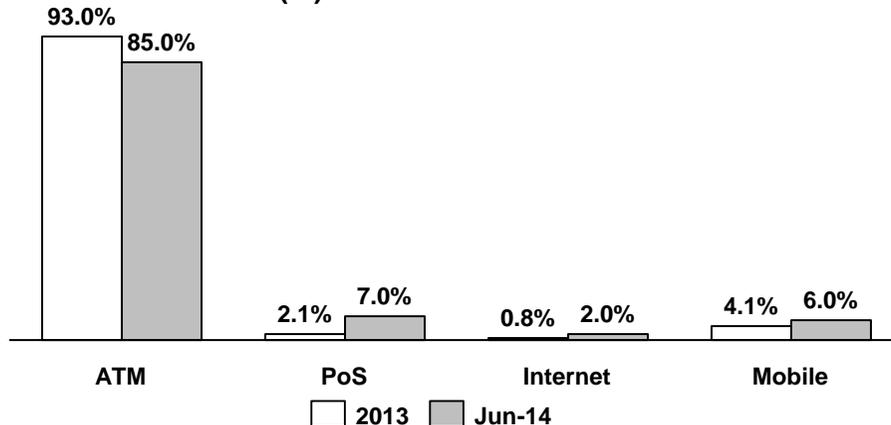
- The maximum total fee a merchant is charged for any PoS transaction is 0.75% of the transaction value subject to a maximum of NGN1,200
- Fees and charges are only applicable to PoS transactions performed with Naira denominated cards; PoS transactions done with cards issued in foreign currencies still follow the pricing arrangement put in place by the relevant international card association/scheme



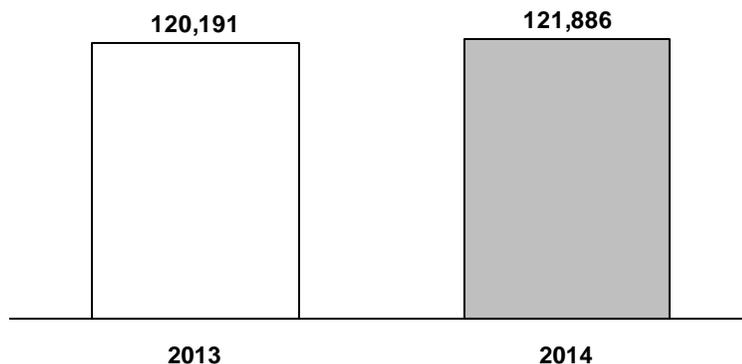
*Fees schedule are reviewed annually

Most recent data on non-cash retail payment channels indicate an increase in adoption and usage of PoS in Nigeria

Volume of E-payment Transactions by Electronic Payment Channel (%) June 2013 – June 2014



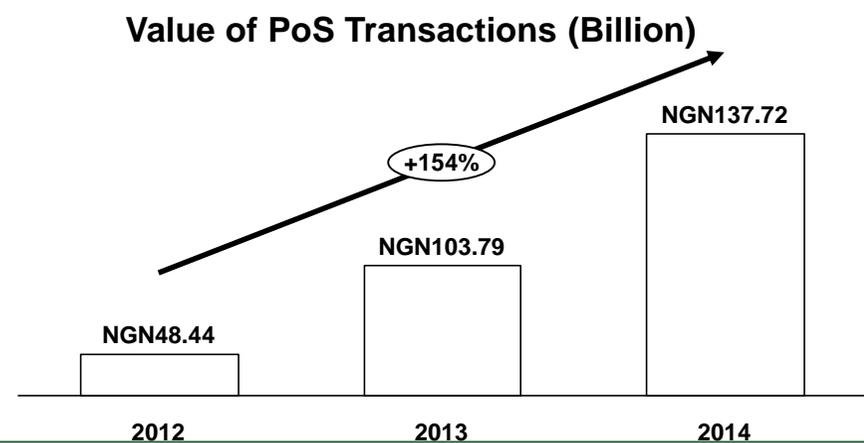
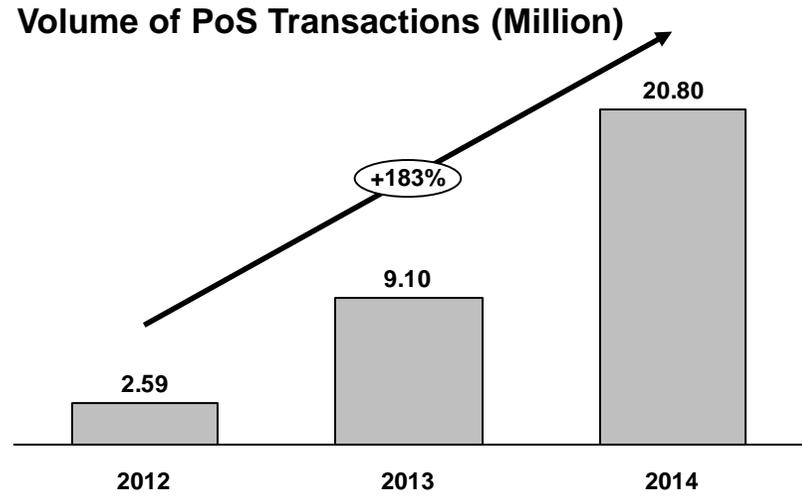
Number of PoS Terminals Deployed (Dec 2013 – Jun 2014)



Key Insights

- Available data on non-cash retail payment volumes in June 2014 show a small but significant increase of 4.9% in the use of PoS as an electronic payment channel
- While the use of ATM fell by 8%, it remained the most patronised channel, accounting for 85% of all transactions by June 2014
- Growth of 1.40% in number of PoS terminals deployed between 2013 and 2014 is also indicative of increasing adoption of the channel as a means of payment

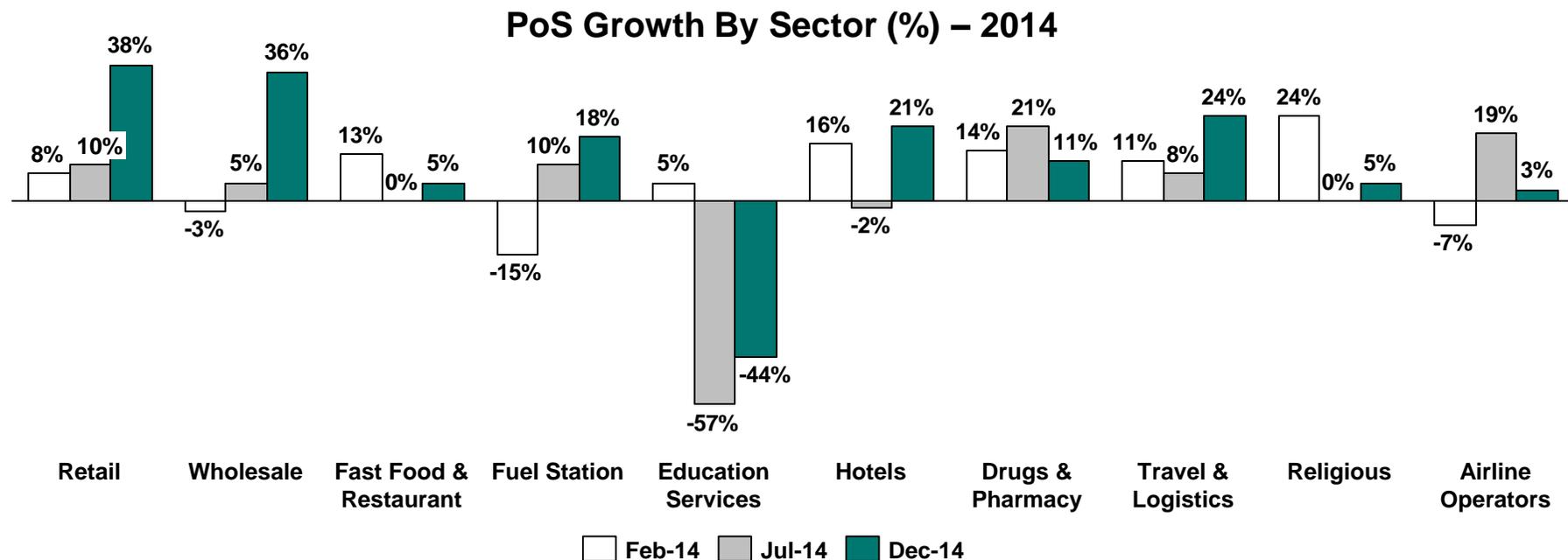
Increasing volume and value of PoS transactions however indicate growing use of the payment channel



Key Insights

- The volume of PoS transactions increased from 2.59 million in 2012, to 9.10 million in 2013, and 20.8 million in 2014, displaying a CAGR of 183%
- Similarly, the value of PoS transactions recorded a CAGR of 154%, increasing from NGN48.44 billion in 2012 to NGN137.72 billion in 2014
- The increase in volume and value of consumer transactions carried out via PoS is indicative of growing acceptance and use of the payment channel, attributable to sustained public awareness

Sector analysis reveals that the retail sector recorded the fastest rate of PoS adoption in 2014



Key Insights

- The retail sector is witnessing the fastest rate of PoS adoption in Nigeria, followed closely by the wholesale, travel and logistics, and religious sectors
- However, PoS as a payment channel appears not to be accepted in the education services sector, which may be indicative of a need to introduce sector-specific incentives that encourage use of PoS in such sectors

To enhance adoption and usage, CBN introduced incentives via the Electronic Payments Incentive Scheme (EPIS)

In September 2014, CBN approved an industry-wide incentive scheme to push further adoption of electronic payment channels by rewarding consumers, merchants and sales persons who use these. These incentives are yet to be implemented, although scheduled to have taken effect by January 1, 2015. They include:

Merchants

- **Reduction of MSC charges:** the Merchant Service Charge rate will be reduced from 1.25% or NGN2000, to 0.75% or a maximum of NGN1200 per transaction
- **Commission on Turnover Exemption (COT):** all electronic inflows from electronic channels into the accounts of merchants will be exempted from COT calculations at the end of each month
- **Mystery Shopper and Recognition:** NIBSS aims to administer rewards and through a mystery shopper and recognition campaign
- **Purchase with Cash Back:** NIBSS in collaboration with Deposit Money Banks facilitates functionalities that allow merchants to offer cash-back services to their customers

Consumers & Sales Persons

- **Point-Based Rewards System:** adopted to reward cardholders, based on points accrued through frequency of card usage
- **Cash Refund:** refund of cash based on card usage
- **Merchant Promotional Campaign:** merchants may leverage an incentive scheme to offer promotional gift items to their customers based on the usage of electronic payments for transactions
- **Sales Persons:** will be encouraged to support electronic payments by being enrolled on the tipping points scheme, through which they will earn points accrued over a period, redeemable as gift or cash

B

Background

B.1 The Evolution of the Nigerian Payment System

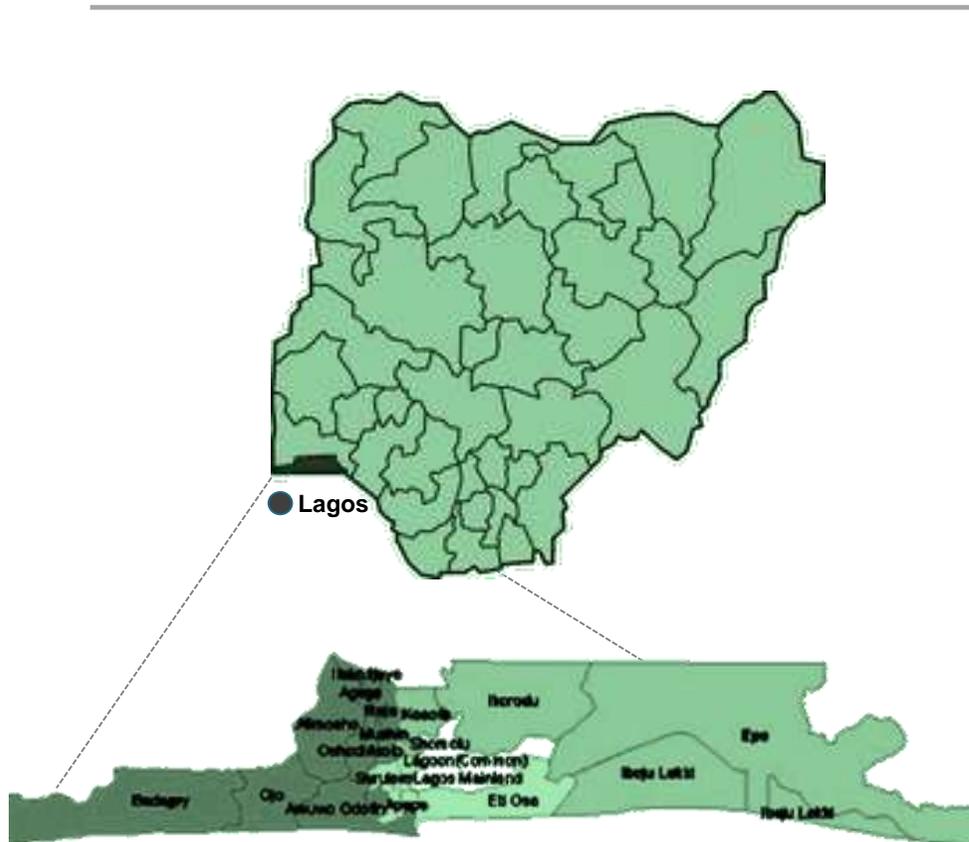
B.2 Cashless Initiative of the Central Bank of Nigeria

B.3 Point of Sales Adoption and Usage in Nigeria

B.4 About Lagos State



Lagos State is the most populous state in Nigeria, and is the country's financial, commercial and industrial nerve centre



Key Insights

- With a population of over 21 million, **Lagos State is the most populous state in Nigeria**. At its present population growth rate of 8%, the UN projects it to become the third largest mega city in the world by 2015
- Being the smallest state in Nigeria, geographically, it has the highest population density. This density is between 4,193 persons per sq.km in the riverine areas and 20,000 persons per sq.km in the metropolis where over 85% of its people reside
- The population of the state is growing ten times faster than New York and Los Angeles, with significant concerns about urban sustainability given its size
- It is **Nigeria's financial, commercial and industrial hub**, harbouring over 60% of the country's total industrial investments and foreign trade, 65% of the country's commercial activities and over 200 financial institutions including the country's stock exchange – the Nigeria Stock Exchange
- It also accounts for more than 40% of all labour remunerations paid in the country

C

Key Survey Findings

C.1

Adoption

C.2

Usage

C.3

Challenges

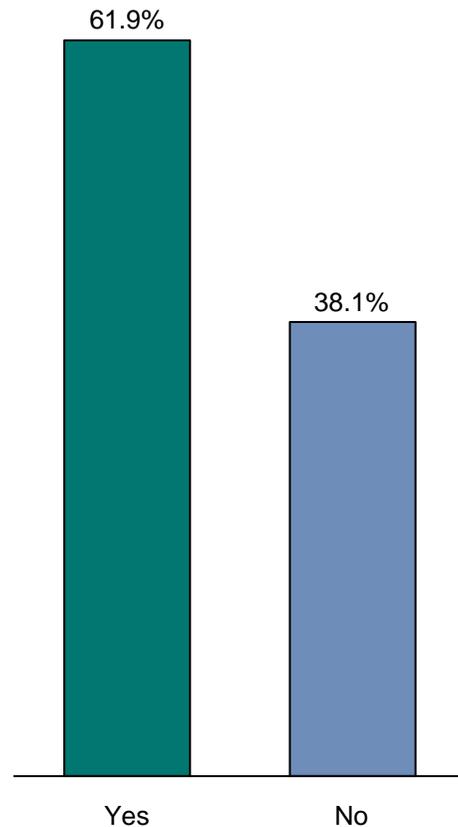
C.4

Stakeholders Perspectives

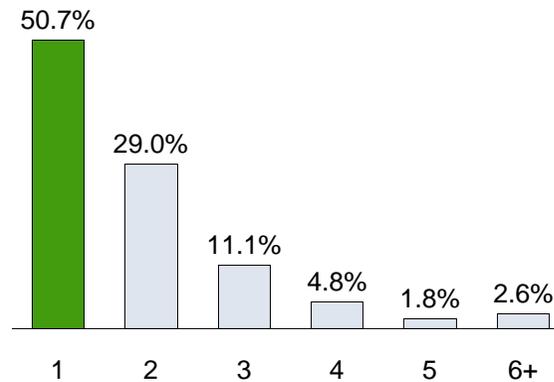


62% of merchants in Lagos have adopted PoS as a form of payment at their businesses and 49% have more than one terminal

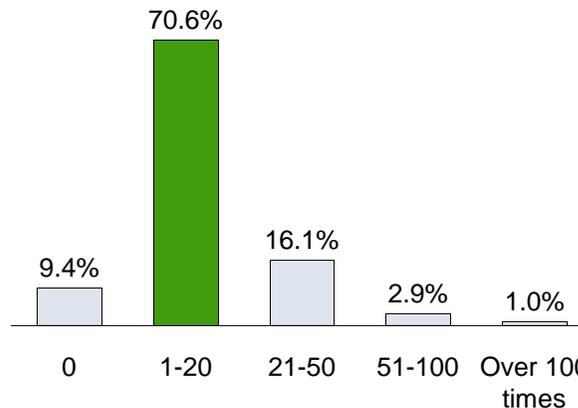
PoS payment option available



Number of PoS terminals deployed



Frequency of PoS daily usage

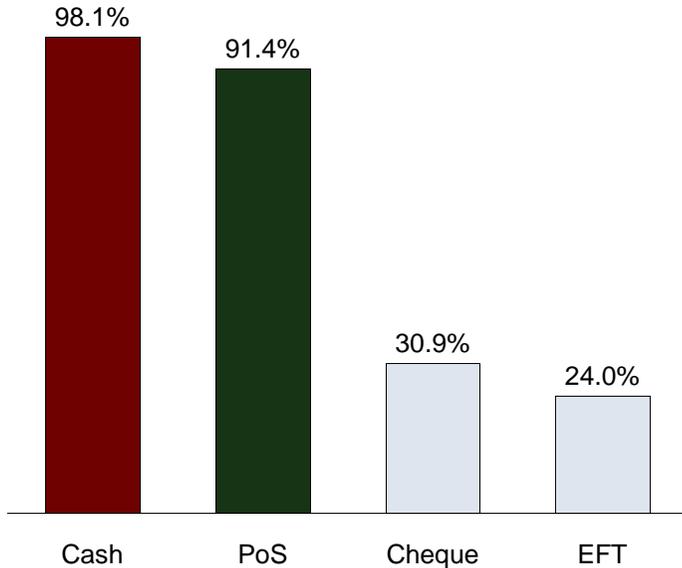


Key Findings

- > 1,426 merchants were surveyed across both urban and rural areas in all 20 LGAs of Lagos State
- > 61.9% of merchants accept PoS as a form of payment
- > 49.3% of those who accept PoS payments claim to have more than one terminal at their business location
- > 70.6% conduct between 1 and 20 payments daily while only 1% claim to use the PoS terminal more than 100 times per day

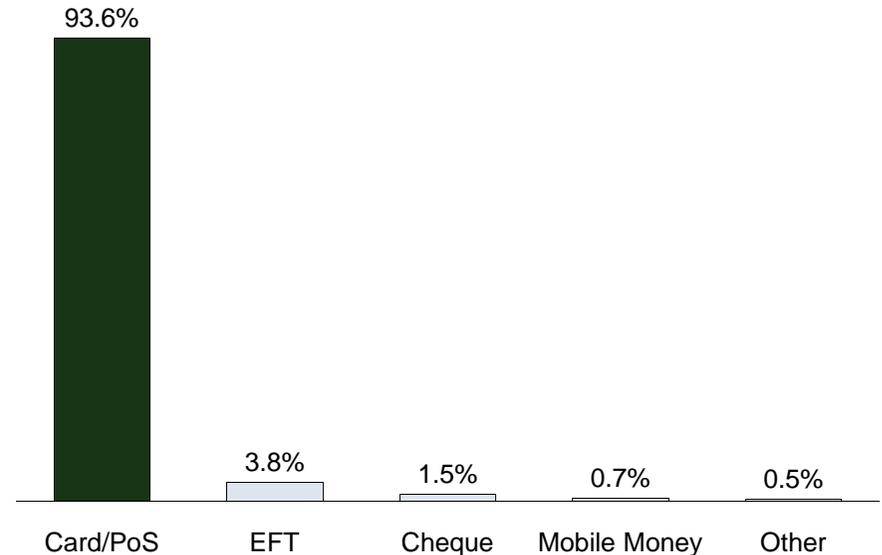
Cash continues to lead as the accepted payment option for goods and services while PoS is the preferred non-cash payment option

***Accepted mode of payment at businesses**



**Responses are not mutually exclusive*

Most preferred non-cash payment method

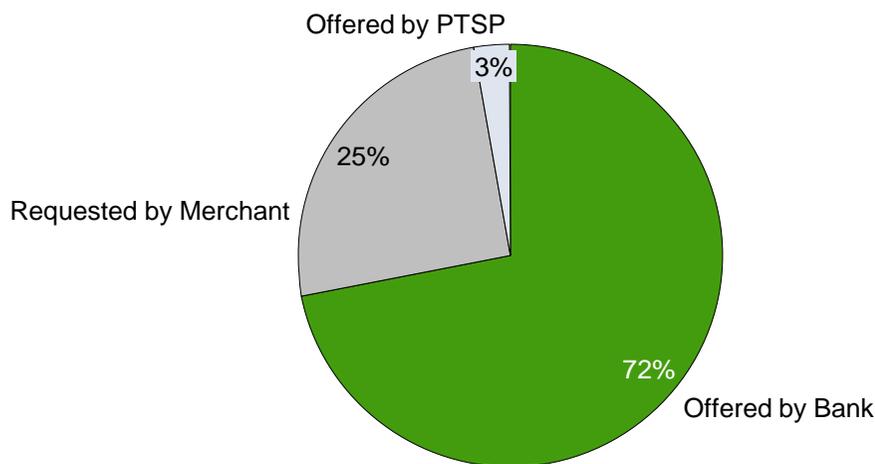


Key Findings

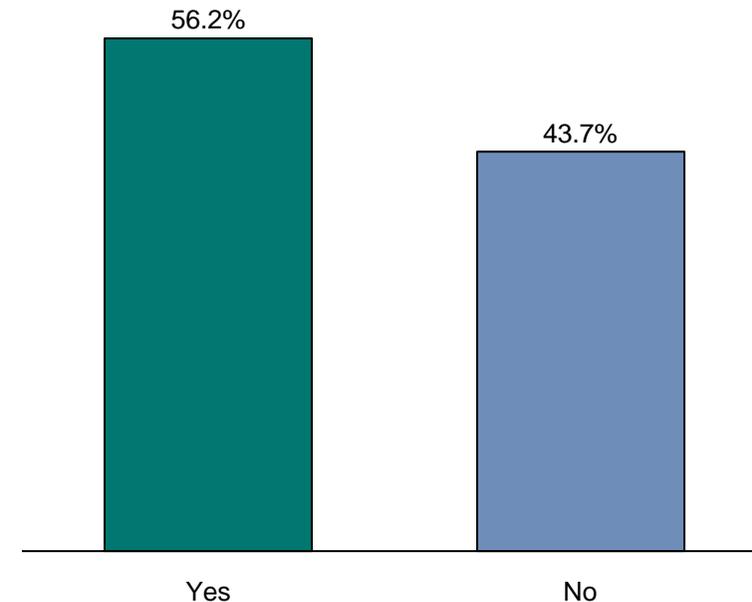
- Of merchants in Lagos State who have PoS terminals, cash is the most accepted mode of payment, received by 98% of surveyed merchants. It is however followed closely by PoS, accepted by 91.4% of respondents
- Cheques and electronic funds transfer (EFT) are less preferred at 30.9% and 24% respectively
- Of the non-cash payment options, PoS is most widely preferred as 93.6% of merchants prefer this over other non-cash forms of payment including EFT, cheque and mobile money

A quarter of merchants with PoS terminals made the request for this service to be deployed at their businesses

Method by which PoS terminal was obtained



If asked to pay for terminal, would you still use PoS?

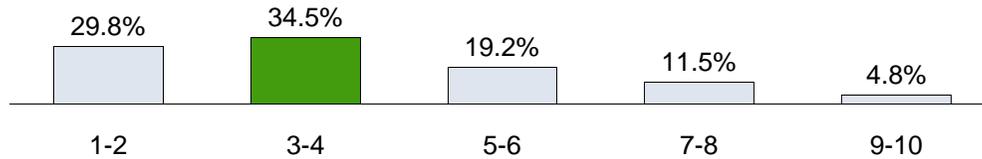


Key Findings

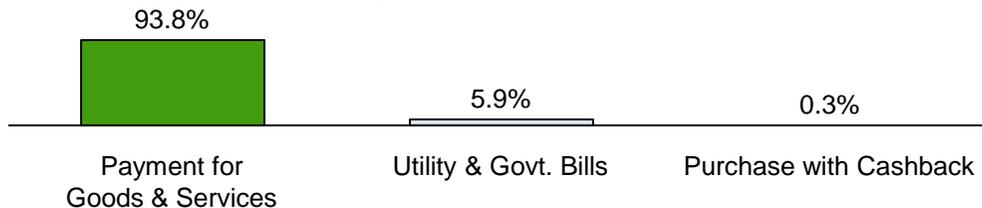
- 25% of merchants with PoS terminal requested for the devices to be deployed to their business, while 72% were offered a PoS terminal by their bank. Only 3% of merchants were offered PoS terminals by PTSPs
- 56.2% of merchants using PoS would continue to use PoS even if they were required to pay for the devices

An average of 3 – 4 of 10 customers request to pay for transactions by PoS and over 90% of payments are towards goods and services

Of every 10 customers, what number ask to pay by PoS?



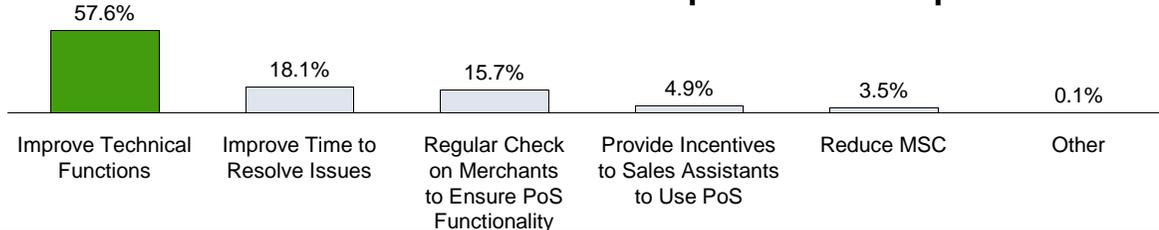
Transaction Type using PoS



Incentive Preference for Using PoS



Recommendations from Merchants to Improve PoS Adoption

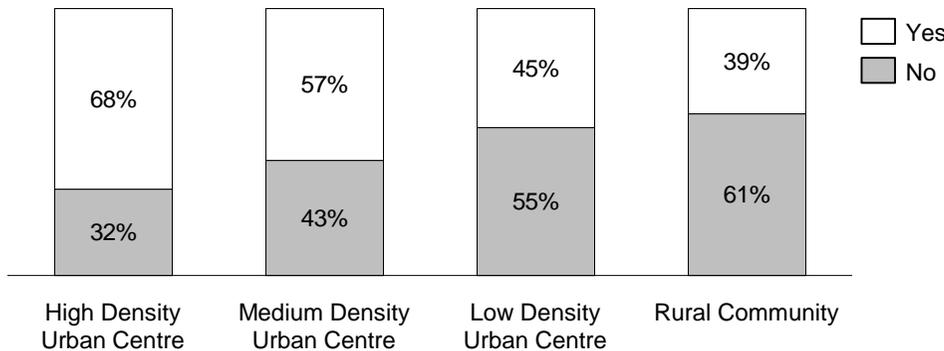


Key Findings

- > 64.3% of merchants report that less than five customers who visit their place of business request to pay by PoS
- > 93.8% of transactions via PoS are payments for goods and services, and only 6.2% are payments towards other items such as utility bills and purchases with cash-back
- > The most attractive incentive to merchants to encourage PoS usage are loyalty points, preferred by 39.4% of respondents. This is followed by coupon and sales discounts at 36.7%, and cash-back on purchases at 20.3%
- > Merchants rate improving the technical functions of PoS terminals highest at 57.6%, as recommendations to encourage adoption. Other recommendations include improving the time to resolve terminal issues (18.1%), regular checks by PTSPs to ensure functionality (15.7%), and incentives to sales assistants to offer PoS to customers (4.9%)

A cross tabulation of data reveals that PoS adoption is highest in high density urban centres

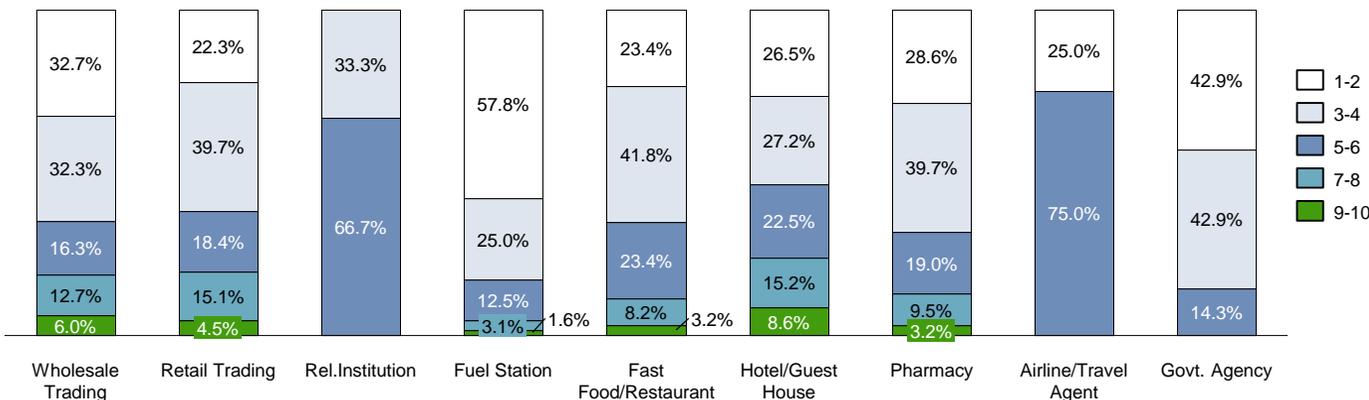
PoS Adoption and Density of Surveyed Area



Key Findings

- > PoS adoption highest in high and medium density urban centres at 68% and 57%; and lowest in rural communities at 39%
- > PoS/Card payments are lowest in fuel stations and government agencies where 57.8% and 42.9% of merchants report that only 1 or 2 customers request to pay via PoS

Business Type and Number of Every 10 Customers that Ask to Pay by PoS



High Density Urban Centre: Ikeja, Lagos Island, Eti-Osa, Surulere, Apapa, Oshodi/Isolo, Mushin

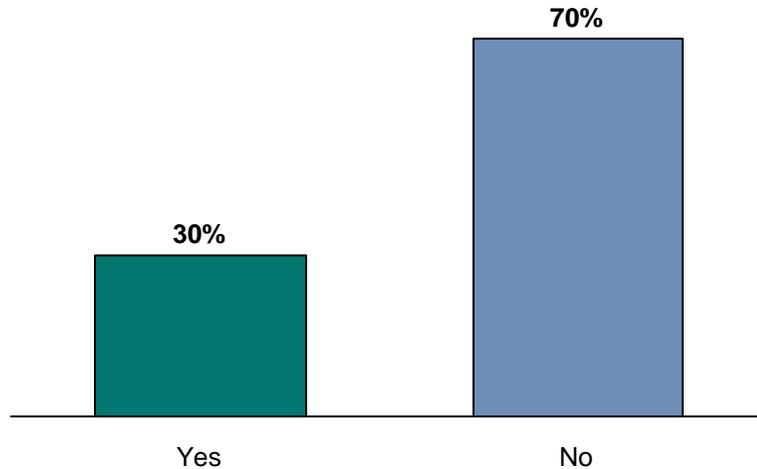
Medium Density Urban Centre: Ikorodu, Alimosho, Ojo, Ajeromi/Ifelodun, Amuwo Odofin, Ifako Ijaiye, Somolu, Lagos Mainland, Kosofe, Agege

Low Density Urban Area: Badagry town, Epe, Ibeju Lekki

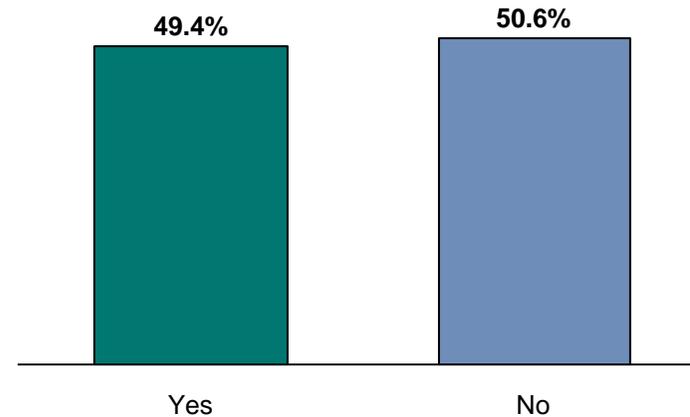
Rural Community: Badagry axis i.e Aradagun, ajara, Ibereko, Apa and Oko Afo; and Ibeju Lekki Axis i.e Eleko and Akodu

A majority of merchants appear negatively disposed to mPoS while there is a 50/50 split towards NFC/Contactless payments

Preference for mobile PoS System



Interest In NFC/Contactless Payments System

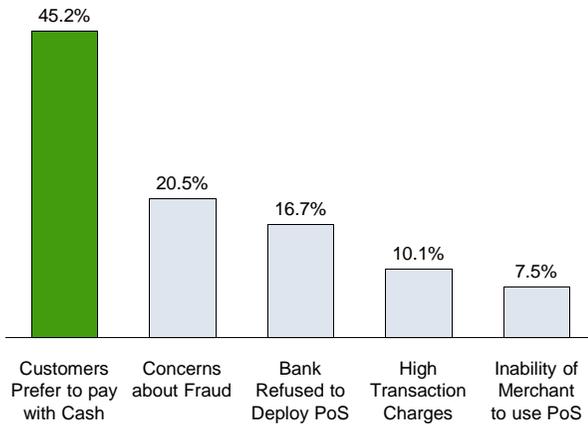


Key Findings

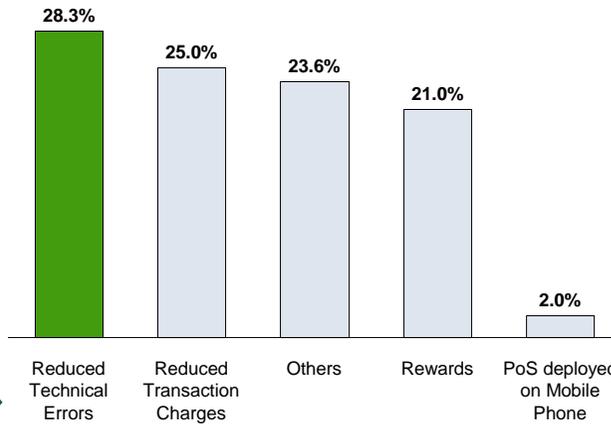
- Merchant attitudes to mPoS appear negative, as the majority, i.e 70%, indicate that they would not prefer a mobile PoS system (mPoS)
- 49.4% of merchants appear interested in Near Field Communication/contactless payments while 50.6% appear uninterested in Near Field Communication/contactless payments

46.3% of merchants without PoS are open to deploying the PoS service but 86.8% are opposed to mobile PoS (mPoS)

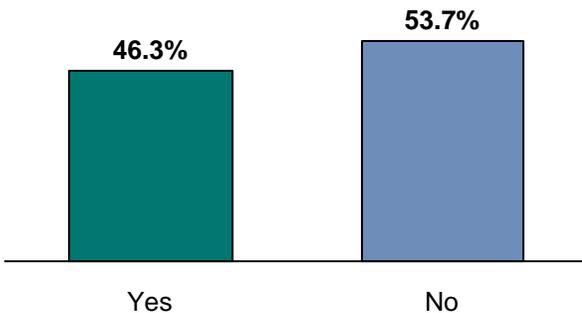
Reasons for Lack of PoS



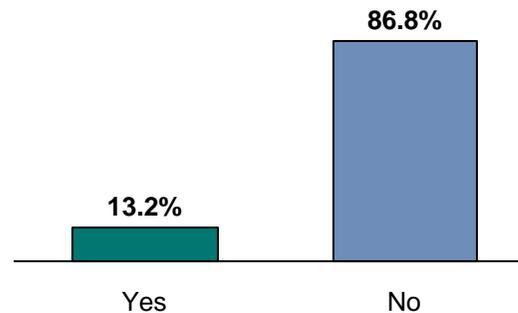
Incentives Required to Deploy PoS



Openness to Having PoS Deployed



Openness to mPoS



Key Findings

- > Merchants who do not use PoS claim that Customers preference for cash is the main reason why they do not have PoS terminals. Other reasons for not having PoS include concern about fraud (20.5%) and banks refusal to deploy PoS (16.7%)
- > However, 46.3% of merchants without PoS are open to having PoS deployed to their business if terminal errors are reduced (28.3%), transaction charges are reduced (25%), and incentive and rewards are offered (21%)
- > 86.8% of merchants without PoS are not interested in a mobile PoS system (mPoS)

C

Key Survey Findings

C.1 Adoption

C.2 Usage

C.3 Challenges

C.4 Stakeholders Perspectives

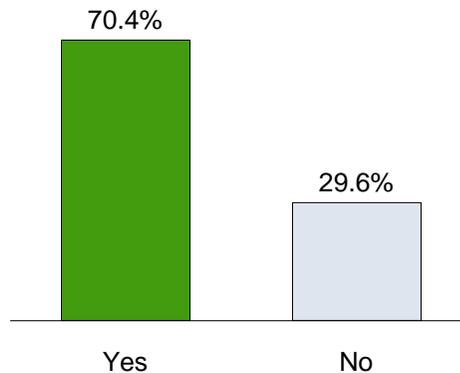


90.2% of adults in Lagos State are banked and 70.4% of them have debit/credit cards while 57.5% have a Bank Verification Number

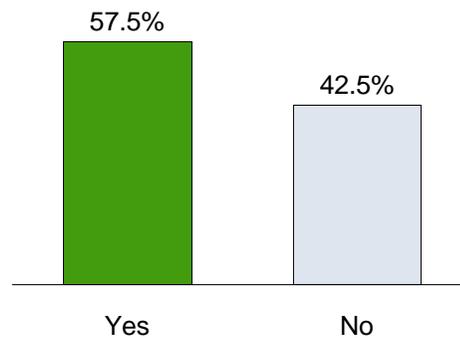
% of Banked individuals



Ownership of Debit/Credit card



Do you have a BVN?



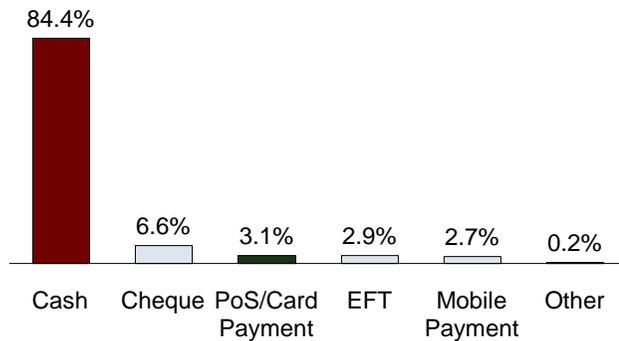
Key Findings

- > 90.2% of the adults in Lagos State have a bank account while 9.8% are unbanked
- > Of the banked adults, 70.4% have debit/credit cards while 29.4% do not have or use debit/credit cards
- > 57.5% of the banked adults have obtained Bank Verification Numbers, which is an initiative of the Central Bank of Nigeria to create a shared database of all bank account holders in order to check fraud and reduce the cost to serve customers
- > The high proportion of adults with bank accounts provides a huge opportunity for the increase in usage of PoS for payments

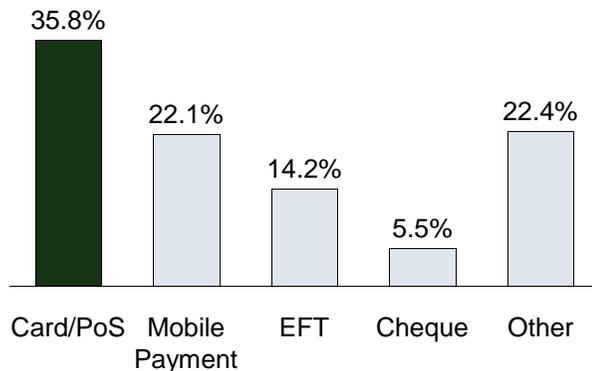
BVN – Bank Verification Number

Despite high ownership of debit cards, only 3.1% of consumers prefer card/PoS as a means of payment for goods and services

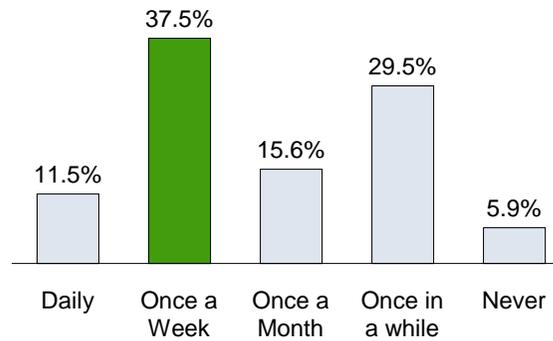
Preferred mode of payment



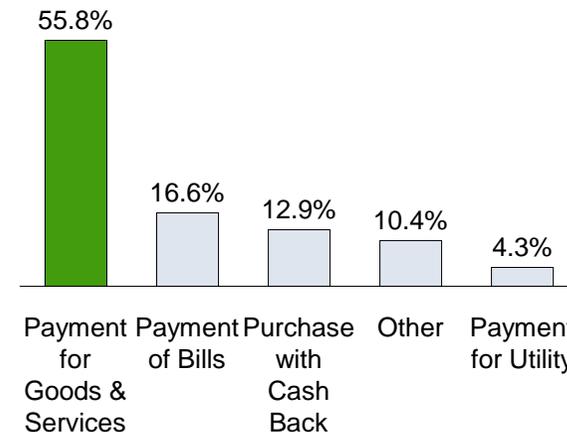
Preferred non-cash payment method



Frequency of use of Debit/Credit card



Most frequent transaction type using Debit/Credit card

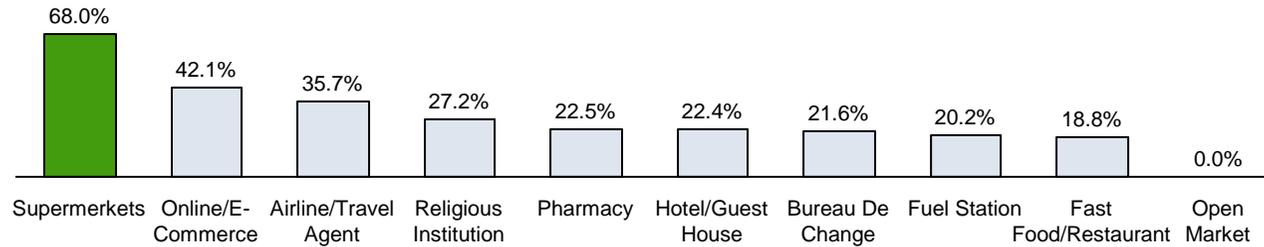


Key Findings

- > Only 3.1% of consumers prefer card/PoS to other forms of payment signaling low acceptance of PoS
- > However, card/PoS is the most preferred non-cash payment option at 35.8%
- > 37.5% of consumers use their debit/credit cards once a week and only 11.5% use the cards daily. This attests to a low rate of usage despite the availability of the service
- > Over 55% of consumers use their cards to pay for goods and services

Card/PoS is used predominantly in supermarkets, for e-commerce, and more frequently for transactions over N1,000

Places where Debit/Credit cards are most used

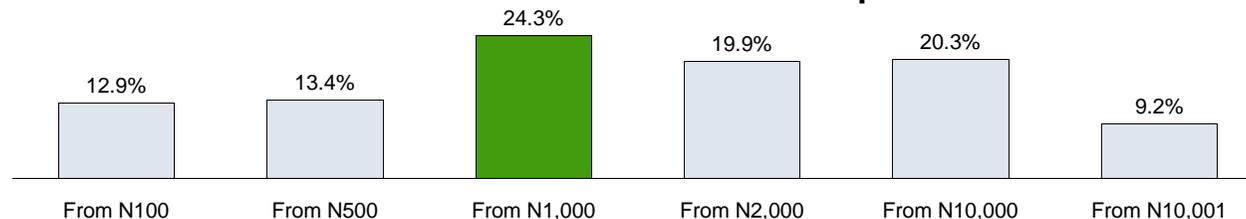


*Responses are not mutually exclusive

Transactions for which cash is preferred



Transaction amounts for which Debit/Credit card is preferred

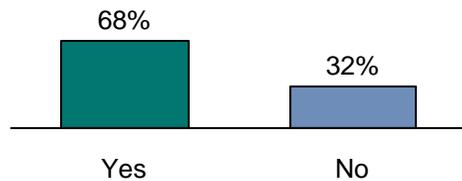


Key Findings

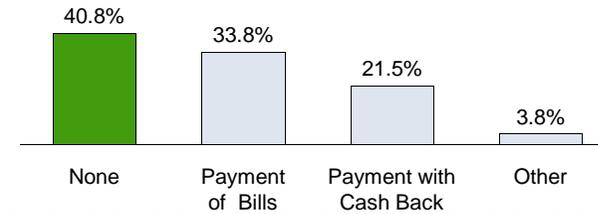
- > PoS/Card payment is predominantly used at supermarkets as 68% of consumers using the service attest to doing so at supermarkets
- > PoS/Card payments do not appear to be used at all at open/ unstructured markets giving rise to 0% usage recorded from the survey
- > Consumers also attest to having a preference for paying small transactions as confirmed by 65.3% of consumers and further buttressed by 73.7% who will not pay for goods less than N1,000 with a debit/credit card

Users of Card/PoS are favourably disposed to contactless cards and recommend awareness initiatives to improve usage

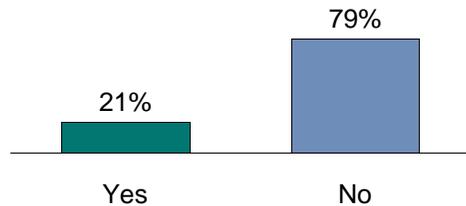
Interest in contactless card (NFC)



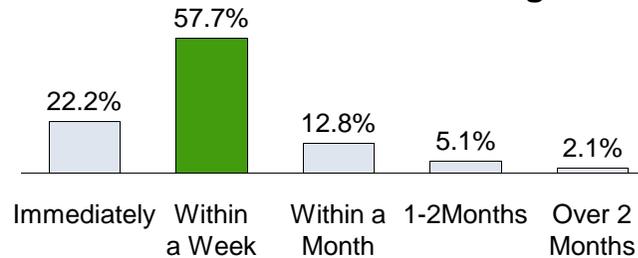
VAS transacted via PoS



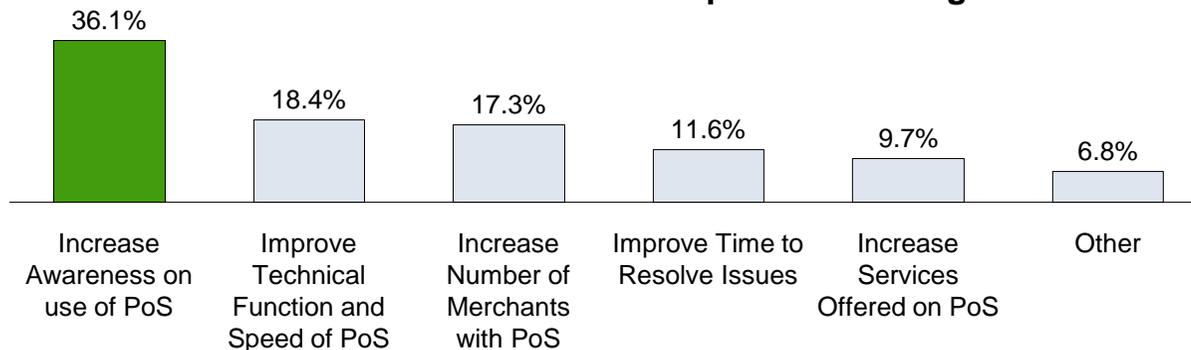
Card double charged using PoS



Refund time from double charge



Recommendations from consumers to improve PoS usage

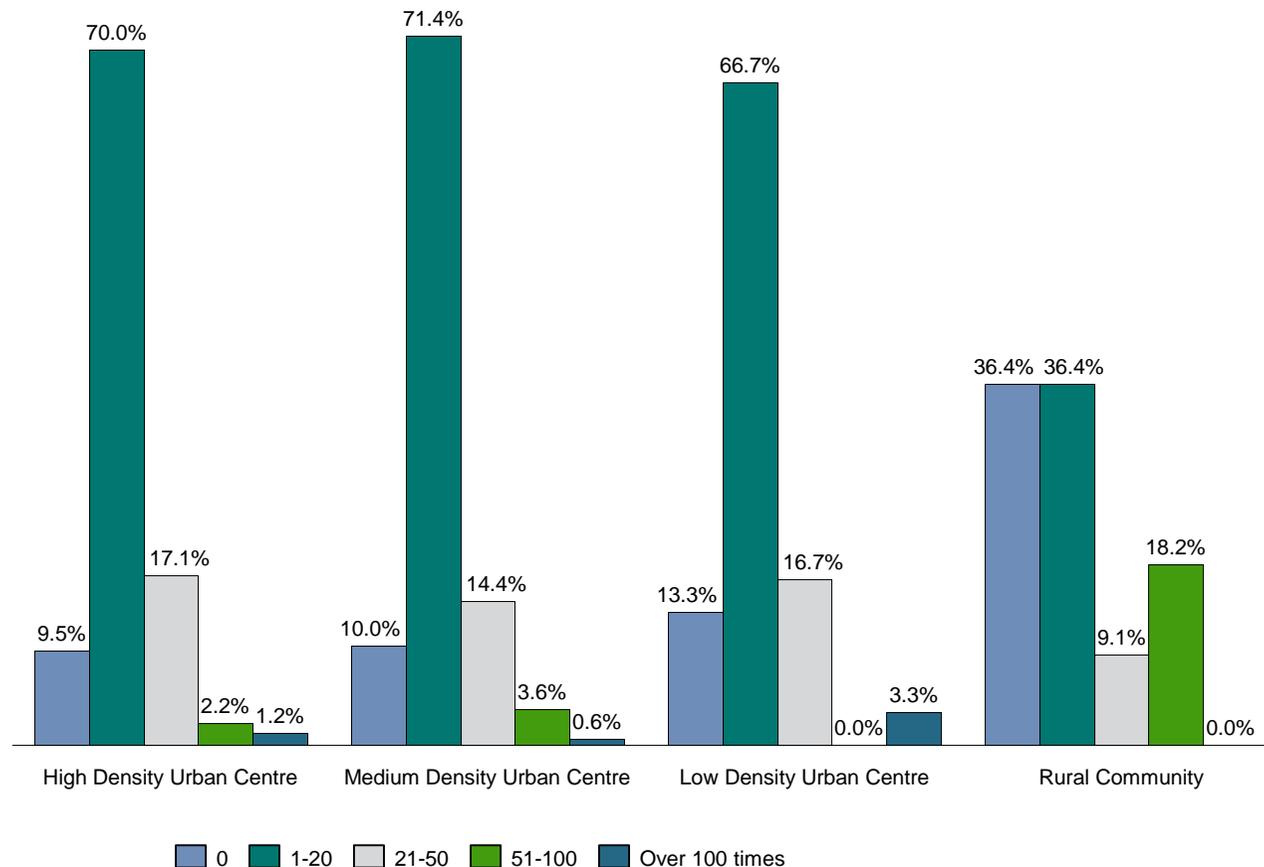


Key Findings

- > 68% of debit/credit card users are favorably disposed to contactless cards
- > A high proportion of PoS users have never transacted in Value Added Services (VAS)
- > 21% of users claim to have experienced a double charge and over 57% say that the reversal was made within a week of the double charge
- > The most prevalent recommendation to improve PoS usage among consumers in to increase awareness on the use and benefits of PoS as a payment option

A cross tabulation of data reveals that the number of transactions via PoS appears not to be dependent on density in urban centres

Frequency of Daily Usage of PoS and Density of Surveyed Area



Key Findings

- > PoS is more frequently used for between 1 and 20 transactions across high, medium and low density areas
- > For rural communities, an equal number of merchants conduct no transaction as those that conduct between 1 and 20 transactions daily. In addition, no merchant conducts more than 100 transactions daily

High Density Urban Centre: Ikeja, Lagos Island, Eti-Osa, Surulere, Apapa, Oshodi/Isolo, Mushin

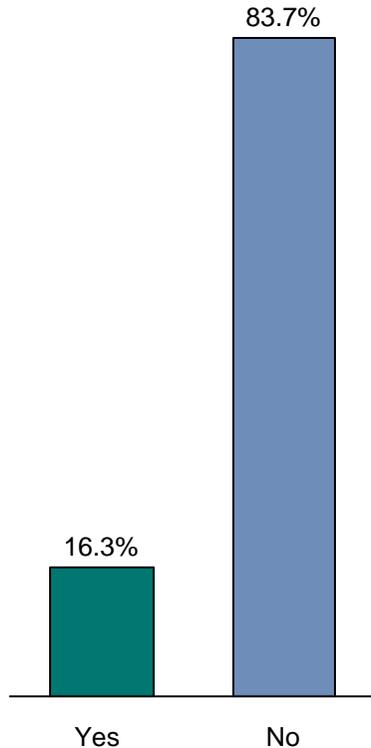
Medium Density Urban Centre: Ikorodu, Alimosho, Ojo, Ajeromi/Ifelodun, Amuwo Odofin, Ifako Ijaiye, Somolu, Lagos Mainland, Kosofe, Agege

Low Density Urban Area: Badagry town, Epe, Ibeju Lekki

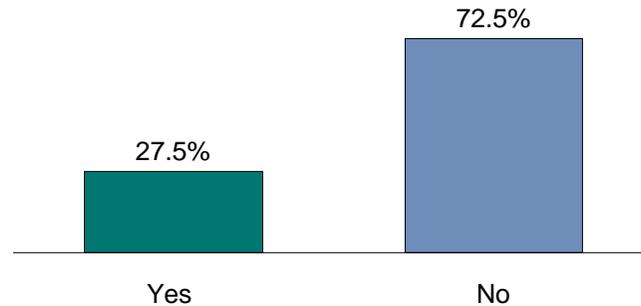
Rural Community: Badagry axis i.e Aradagun, ajara, Ibereko, Apa and Oko Afo; and Ibeju Lekki Axis i.e Eleko and Akodu

There is a high level of unawareness of the benefits of Card/PoS use among non-users

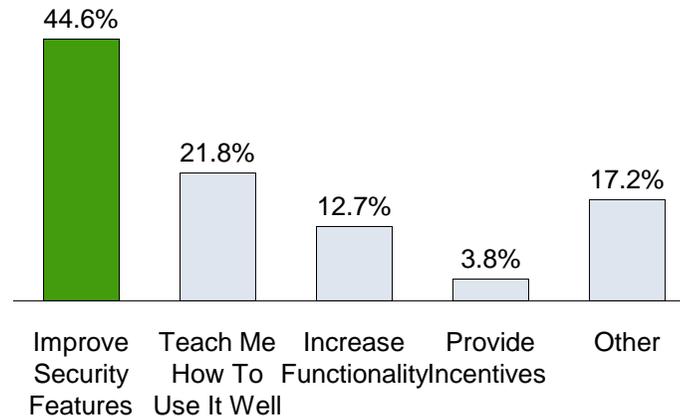
Debit/Credit card issued but not in use



Do you know that using PoS is safe, easy, convenient, quick and at no cost to you?



What could make you start using a Debit/Credit card?



Key Findings

- > Among non-users of PoS, 16.3% attest to have been issued a debit/credit card by the bank though they do not use it
- > Only 27.5% of non-users know the benefits of PoS as a payment method
- > Security of funds appeared to lead the charts as 44.6% of the PoS non-users claim that increasing security features could make them start using PoS/card. Another pertinent recommendation from non-users is awareness as 21.8% claim that they will use the service if taught how to use it properly

C

Key Survey Findings

C.1 Adoption

C.2 Usage

C.3 Challenges

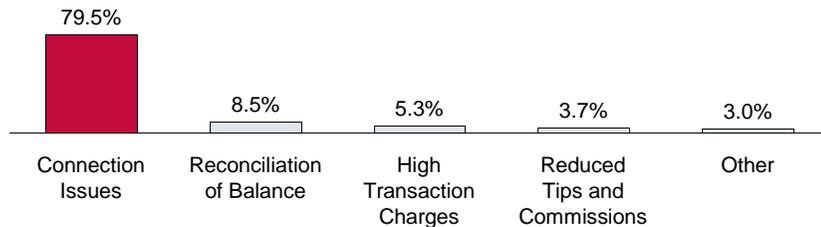
C.4 Stakeholders Perspectives



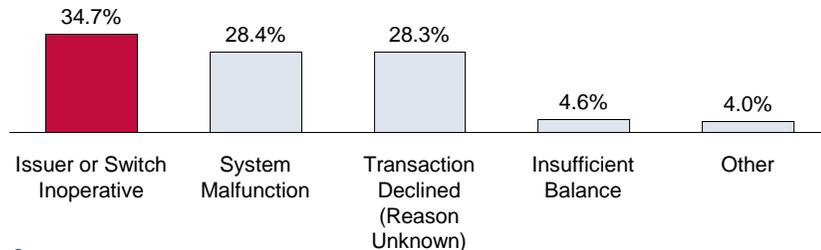
The most significant challenge to adoption and usage from the perspective of merchants is technical i.e. connection issues

Merchant Perspectives

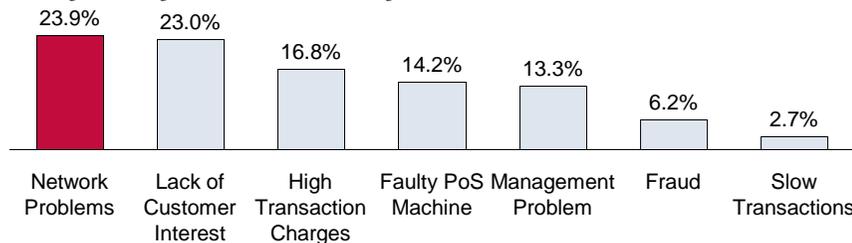
Most Significant Challenge with PoS Terminals



Most Frequent Reason for Declined Transactions



Why did you abandon your PoS Terminal?

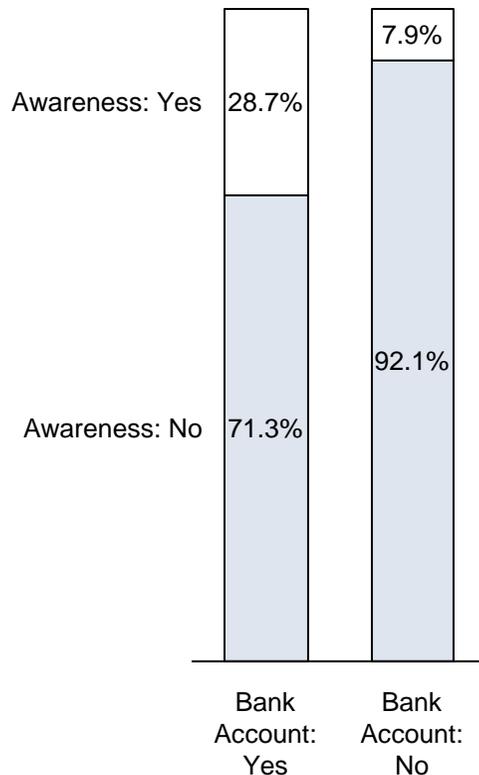


Comments

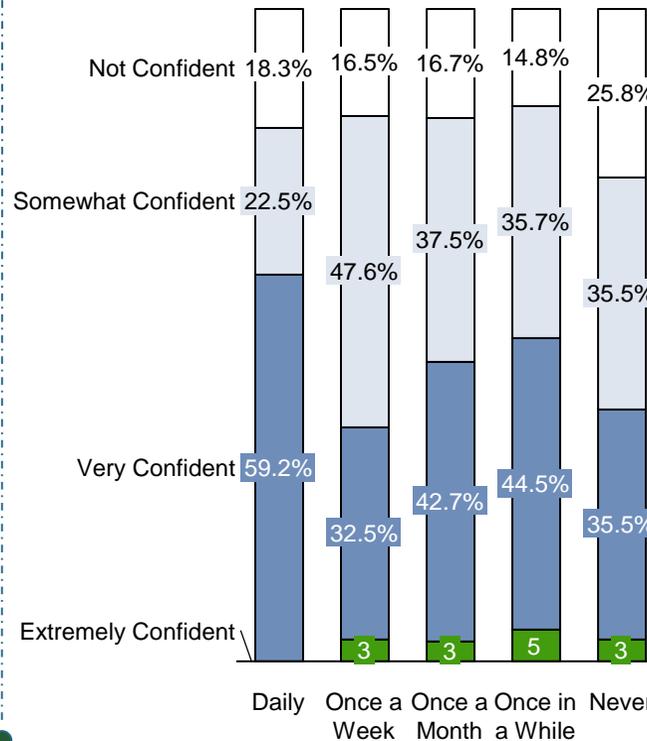
- From the perspective of merchants, technical difficulty appears to be the single largest challenge to use of PoS as a payment method
- 79.5% cite connection issues as the most significant challenge with their PoS terminals. The aggregate of those who note high transaction charges and reduced tips as most significant is 9% which shows that the prevailing issue with using PoS is technical
- 34.7% note 'issuer or switch inoperative' as the most frequent reason for declined transactions. It is pertinent to note that only 4.6% cite of insufficient balance as the reason for declined transactions
- Of the merchants who have abandoned their PoS terminals, 23.9% cite network problems as the reason for abandoning these terminals. Followed closely is the lack of customer interest cited by 23% of merchants as the key reason for abandonment of PoS

A cross tabulation of data shows that awareness is low both amongst banked and unbanked consumers

Do you have a bank account and Awareness of the safety, ease and convenience of PoS use



Frequency of Debit/Credit (ATM) Card Payments and Confidence in Resolution Time of Issues with card Payments



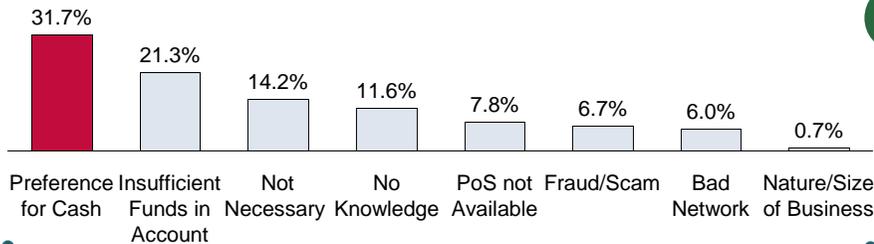
Key Findings

- > A substantial 71.3% of consumers with bank accounts are unaware of the safety, ease and convenience of PoS use; and 92.1% of those without bank accounts are equally unaware of the benefits of PoS use
- > Daily use of card for transactions is significantly higher among consumers who claim to be very confident that card issues would be resolved should they arise (59.2%)
- > Use of cards for payments is generally higher across the chart for consumers who are somewhat and very confident that card issues would be resolved. However, frequency of use is markedly higher among consumers who are very confident in resolution times

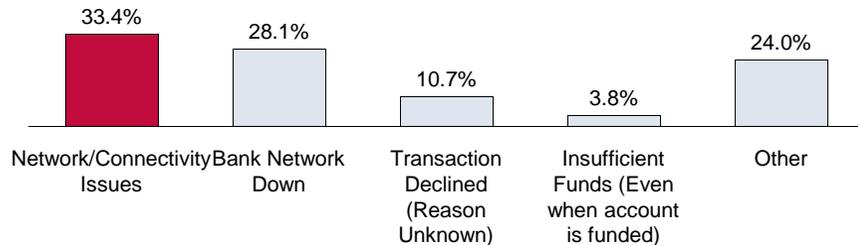
The most salient challenges to usage among consumers are a preference for cash, connectivity issues and lack of knowledge

Consumer Perspectives

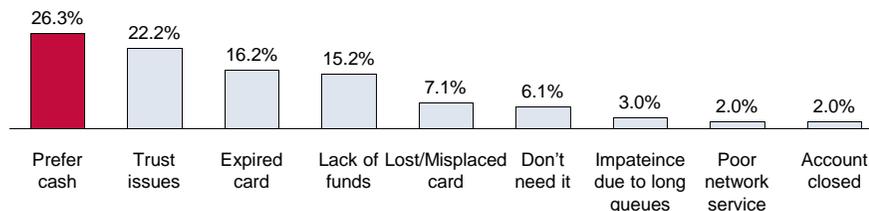
Main reason for irregular use of debit card at Point of Sale



Most frequent reason for decline of your PoS Transactions



Reasons for disuse of Debit/Credit card



Comments

- From the perspective of consumers, the 'preference for cash' appears to be the most prevalent reason for not using PoS/card as a payment option
- Technical issues i.e. network/connectivity issue is cited as the most frequent reason for declined PoS transactions, which indicates that technical challenges also have an impact on the challenges experienced in using PoS as a payment method
- Other factors such as trust/security concerns are highlighted as reasons for disuse of debit/credit card
- According to consumers the preference for cash is based on the reliability of cash as a payment method

C

Key Survey Findings

C.1 Adoption

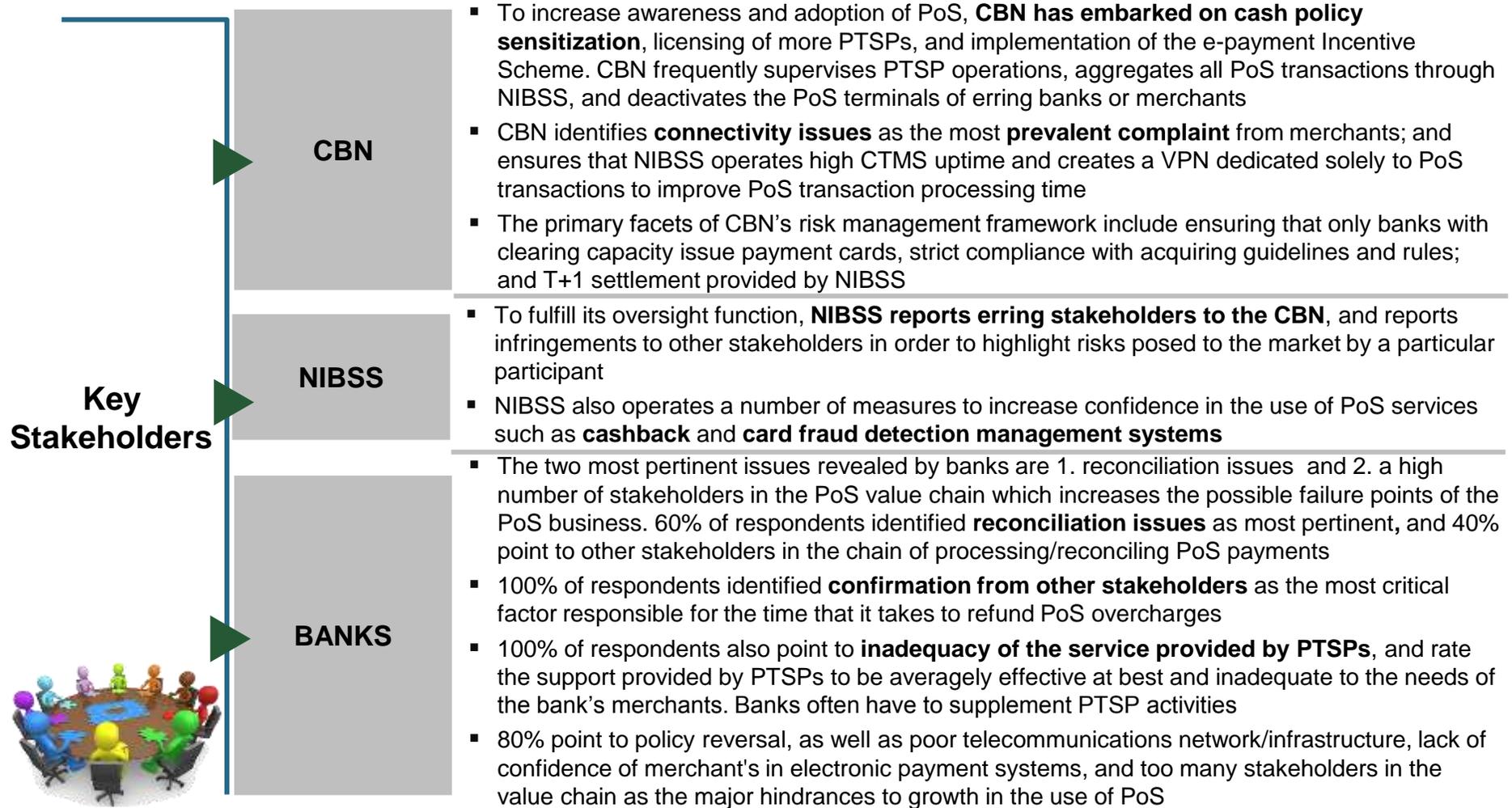
C.2 Usage

C.3 Challenges

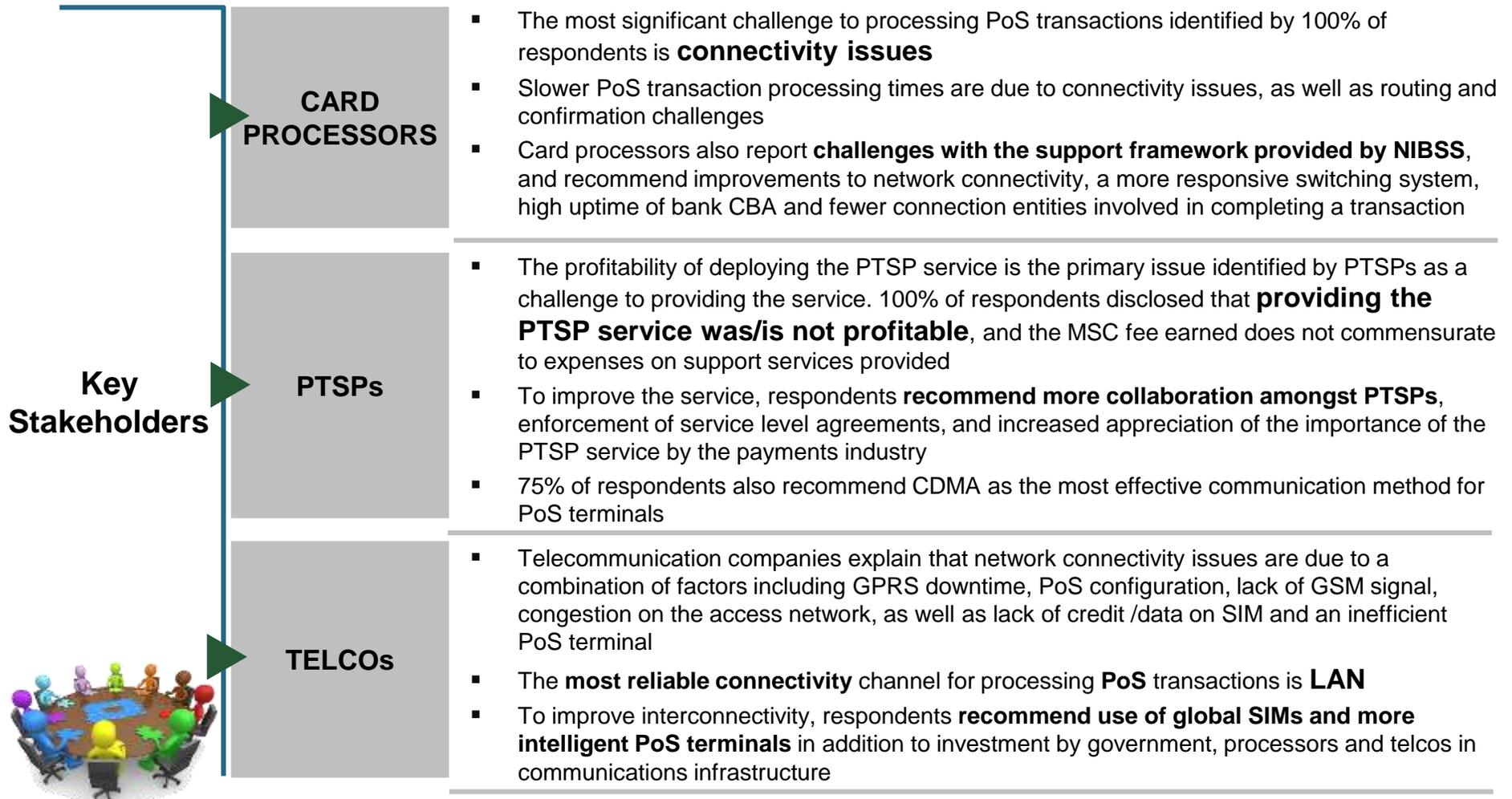
C.4 Stakeholders Perspectives



A survey of operators in the PoS business value chain reveals critical stakeholder perspectives (1/2)



A survey of operators in the PoS business value chain reveals critical stakeholder perspectives (2/2)



A summary of key findings

Adoption

- The PoS adoption rate in Lagos State is at 62%, with 62% of merchants providing PoS payment option and 63% of individuals owning and using debit/credit cards i.e. (70.4% ownership among 90.2% banked adults)
- PoS is the most popular non-cash payment channel, preferred among the non-cash payment options by 93.6% of merchants, and 35.8% of consumers

Usage

- Usage of card/PoS is fair with an average of 3 – 4 of every 10 customers requesting to pay for transactions by card/PoS
- However, only 3.1% of consumers cite card/PoS as their preferred payment option attesting the low usage of PoS

Most Significant Challenges

- *Merchants:* Poor connectivity is cited as the most prevalent challenge that merchants experience in using PoS service
- *Consumers:* There is a preference for cash among consumers and a low level of awareness of the benefit of using PoS especially among non-users of PoS, i.e. 72.5% of non-users claim to be unaware of the benefits of using PoS

Stakeholder Perspectives

- **CBN and NIBSS** have implemented risk management frameworks and various measures to increase the adoption and usage of the PoS service
- **Poor connectivity** appears to be a consistent challenge, noted by all operators, to the use of PoS
- All banks noted the **inadequacy of services provided by PTSPs** while PTSPs noted that their service was/is not profitable and that there is a need for better collaboration amongst existing licensed PTSPs to improve service
- Card processors noted that there are **too many stakeholders** involved in the end-to-end processing of PoS transactions and that this accounts for inefficiencies and a lengthening of the timeframe for resolving issues
- To improve connectivity, Telcos recommend the use of **LAN, global SIM cards and more intelligent PoS terminals**

D

Case Studies

D.1 The Structured Market Place – A comparison of three malls

D.2 An Unstructured Market Place – Ajah Market

D.3 Key Comparison



A comparison of three malls in Lagos State



The Palms Mall, Lekki

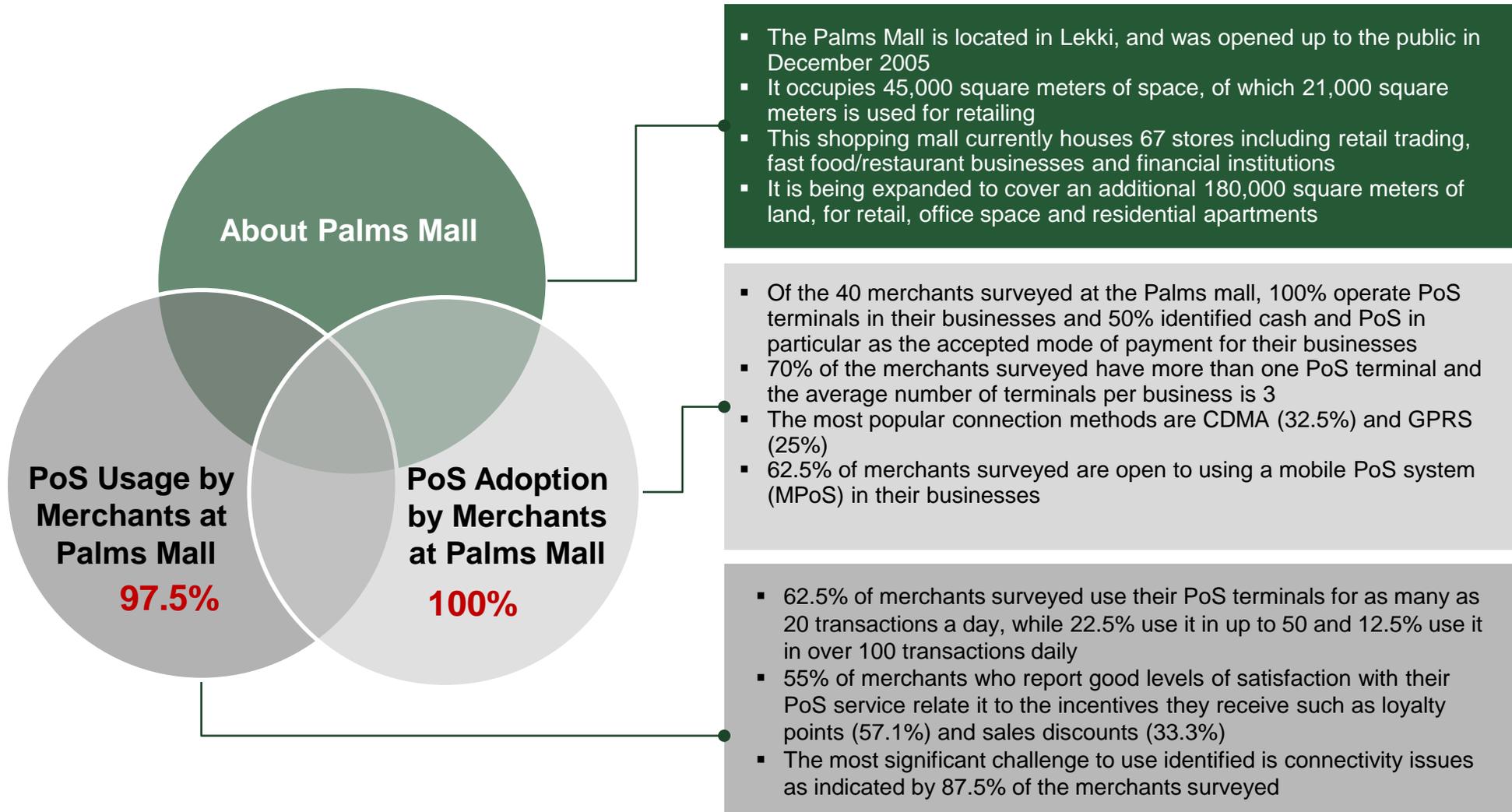


Silverbird Galleria



Mega Plaza Mall

A structured market place: Palms Mall



A structured market place: Silverbird Plaza

About Silverbird Plaza

- Silverbird Galleria is located in Victoria Island, Lagos and was opened up to the public in 2004
- It features four floors of space for fast food/restaurants and other retail businesses
- The Galleria also house a cinema, an arcade, a radio station, and serves as an event centre

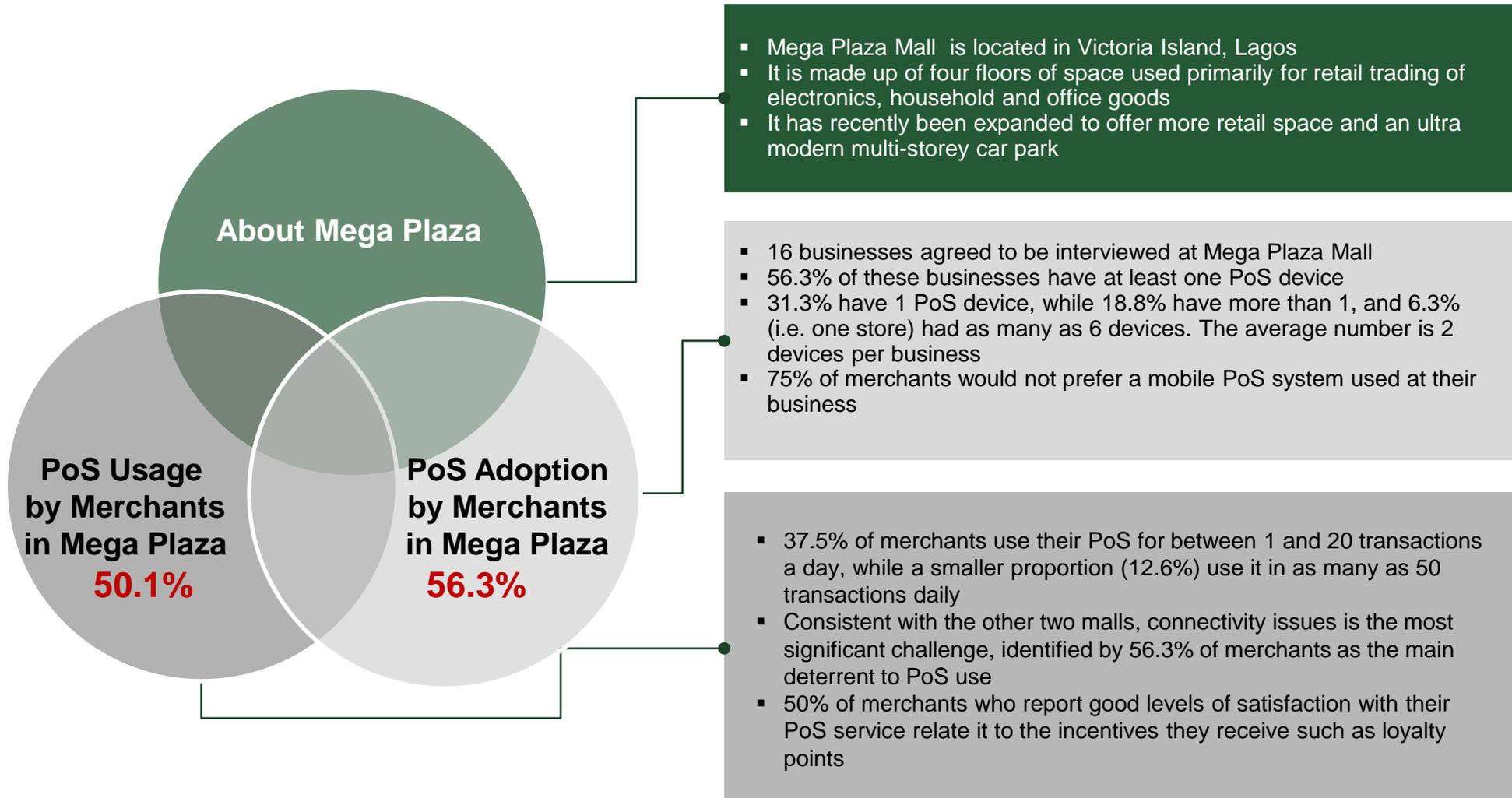
PoS Usage by Merchants in Silverbird 80%

PoS Adoption by Merchants in Silverbird 80%

- 10 merchants were surveyed in Silverbird Galleria
- Of these, 80% had PoS terminals and connect primarily through GPRS (50%) and CDMA (20%)
- 70% identified cards/PoS as the most accepted payment mode, indicating a high level of adoption of the payment means
- 20% of the surveyed group have 1 PoS terminal, 40% have 2, and another 20% have as many as 4 machines. The average number is 2 devices per business
- The presence of multiple PoS machines is primarily due to connectivity issues, which the merchants identified as the most significant challenge to the use of PoS
- 75% would not prefer a mobile PoS system (mPoS)

- Statistics show above average usage levels as 60% of the surveyed group report usage frequency of between 1 and 20 times a day, while a minority (20%) use their terminals for as many as 50 transactions a day
- The merchants also related a desire for more frequent maintenance visits from their PTSP (once a week) to ensure the functionality of their PoS devices
- Findings show a minimal correlation between incentive and use, as only 20% of merchants indicated any correlation between satisfaction with the PoS service and incentives received

A structured market place: Mega Plaza Mall



The case of PoS Adoption at three malls in Lagos State

Overview

PoS service is an accepted means of payment at three retail malls i.e The Palms Mall Lekki, Silverbird Galleria and Mega Plaza Mall Victoria Island in Lagos State. **All three malls boast of high adoption rates for PoS service.** However a difference is noted in the level of adoption with 100% at The Palms, 80% at Silverbird Galleria and 56.3% at Mega Plaza Mall.

The Palms Mall has an average of 3 PoS terminals per business, while Silverbird Galleria and Mega Plaza Mall each have 2 PoS terminals per business operating within the premises. **The most significant challenge to PoS use, consistent across all three malls, is connectivity issues,** identified by 87.5% of respondents in The Palms Mall, 60% in Silverbird Galleria and 56.3% of respondents in Mega Plaza Mall. **Other issues identified were PoS system malfunction and difficulties in reconciling balances. Strong correlations were found between levels of satisfaction with PoS and the frequency of PTSP visits to retailers.**

For respondents who rated their satisfaction levels either as average or good in The Palms Mall, an 87.5% correlation was found between their reported levels of satisfaction and the weekly maintenance visits they received from their PTSP. In Silverbird Galleria, 100% of respondents expressed a desire for a minimum of 1 maintenance visit from their PTSP per week; and in Mega Plaza Mall, a 56.3% correlation was found between satisfaction and weekly maintenance visits for respondents who rated their current satisfaction level as average.

Key questions:

1. Why are adoption levels significantly different at each mall?
2. Could a resolution of connectivity issues increase usage of PoS for payments?
3. Would an increase in visits by PTSPs increase satisfaction with and usage of PoS terminals?

D

Case Studies

D.1 A Structured Market Place – Mega Plaza Mall

D.2 An Unstructured Market Place – Ajah Market

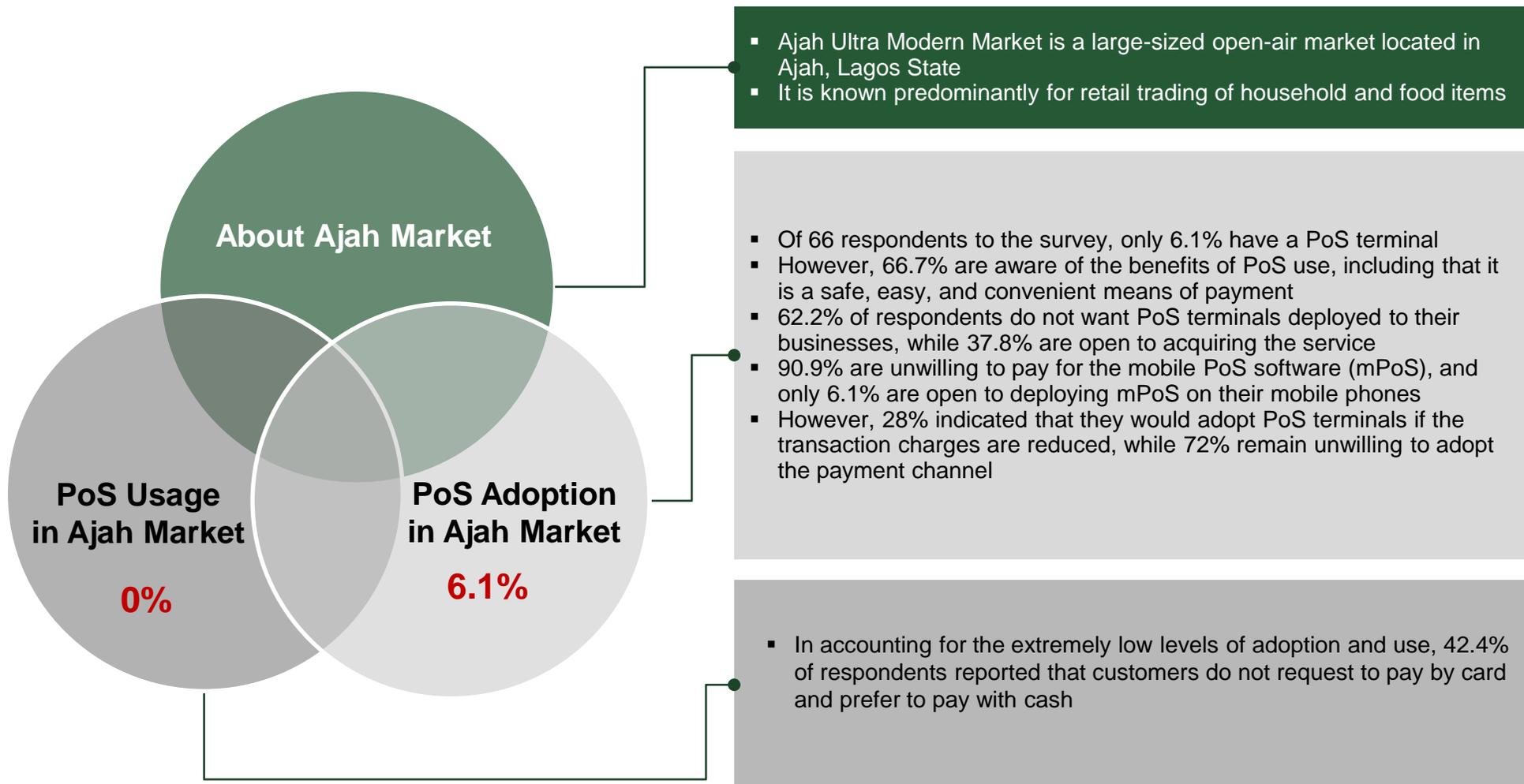
D.3 Key Comparison



An unstructured market place – Ajah Market



An unstructured market place: Ajah Market



The case of PoS Adoption at Ajah Ultra Modern Market, Lagos State

Overview

Ajah Ultra modern market is a large open-air wholesale and retail trading area that attracts a large proportion of the Lagos population. Ajah market also serves a range of visitors from widely varying income brackets.

Here, **PoS service is an unpopular means of payment, with an adoption rate of only 6.1%** even though 66.7% admit to being aware of the benefits of using PoS. When asked about openness to the payment channel, **62.2% of respondents expressed an unwillingness for PoS to be deployed at their businesses.** The proportion of transactions paid using PoS at Ajah market is currently 0% despite a 6.1% adoption rate.

Key questions:

1. What accounts for the significantly different levels of adoption between Ajah Market and the three shopping malls?
2. Why do merchants at Ajah market appear unwilling to have PoS deployed at their businesses despite claiming to know the benefits of PoS? Do they really know the benefits of PoS?
3. What incentives could be introduced to encourage adoption and usage of PoS in these types of market environments?

D

Case Studies

D.1 The Structured Market Place – The case of three malls

D.2 An Unstructured Market Place – Ajah Market

D.3 Key Comparison



A comparison of the two market types shows that PoS adoption is high in structured markets and very low in unstructured markets

Structured Market

- ❑ Of a total of 66 merchants surveyed in the structured market places, 86.4% have PoS terminals
- ❑ 66% of respondents across all 3 malls conduct between 1 and 20 PoS transactions daily, while 28.6% conduct as many as 50 transactions daily
- ❑ The single most pressing deterrent to PoS use across all three malls was connectivity issues, identified by 87.7% of all merchants interviewed; and is the primary area recommended for improvement
- ❑ Results show minimal correlation between use and incentives offered
- ❑ 52% of participants across all three structured markets are willing to deploy mPoS

Unstructured Market

- ❑ Here, only 6.1% of merchants have PoS terminals. Again this may be indicative of the informal nature of trade in this environment
- ❑ The proportion of PoS use here is 0%
- ❑ The preference for cash over card/PoS payments reported by 42.4% of respondents partly explains the level of PoS use in this market
- ❑ This preference for cash payments may also explain the unwillingness of 62.2% of merchants to acquire the payment channel for their businesses though being aware of the benefits of using PoS. 28% cite reduction in transaction charges as an incentive/recommendation to boost PoS adoption
- ❑ Openness to mPoS appears to be low with only 6.1% expressing a willingness to deploy mPoS

An area of consistency in both market environments is the low levels of openness to a mobile PoS system. An outlier here is the Palms Mall, where 62.5% of merchants responded positively to the idea of purchasing mPoS software. Results also show that a majority of merchants in both markets are unaware of the fees charged on PoS transactions.

Case Study Summary

The results of the case studies reveal significant differences in the levels of adoption, usage and attitudes to PoS as a payment channel between the structured and unstructured market environments. While **adoption and usage levels are above the 50% level in the structured market environments, they are markedly lower at 6.1% and 0% in the unstructured market place (Ajah market). These results further corroborate the findings of the consumer survey of 0% use of cards/PoS by consumers in open markets.** Merchants also appear to be averse to PoS deployment and usage in open markets.

Key issues identified through the case studies are:

- Connectivity issues
- System malfunctions and higher maintenance effort required from PTSPs
- Functionality of PoS terminals – PoS machines should be able to spool exact transaction in the case of a missing receipt instead of spooling all the transactions for the week

These findings indicate the need to address key issues, to develop awareness and incentive programs targeted both at merchants and customers in order to discourage cash and promote card payments in especially, unstructured marketplaces

E**Benchmark Analysis****E.1**

Adoption

E.2

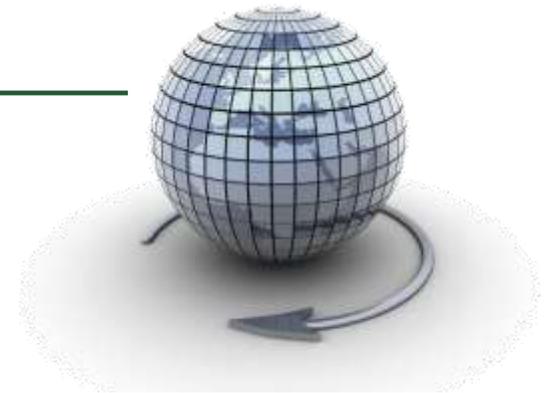
Usage

E.3

Regulation

E.4

Key Learning



Benchmark analysis reviews trends in payments and PoS adoption across selected countries

Countries Reviewed

- South Africa 
- Kenya 
- Brazil 
- Mexico 
- Portugal 
- Malaysia 



Vibrant economies depend on widely accepted forms of cash and non-cash payment systems for real economic growth

Vibrant economies rely on paper-based as well as electronic payment instruments for real economic growth. While most economies remain largely cash-dependent, **electronic payment channels are expected to provide speedier, cheaper and highly convenient payment experiences to customers** in comparison to traditional paper-based payment instruments.

In many countries, the widespread adoption of electronic payments has significantly expanded the sales volume of goods and services, reduced barriers to immediate credit and liquidity, eased geographic restrictions to trade and exchange, and accrued increasing benefits to all parties in the transaction chain. Such benefits include:

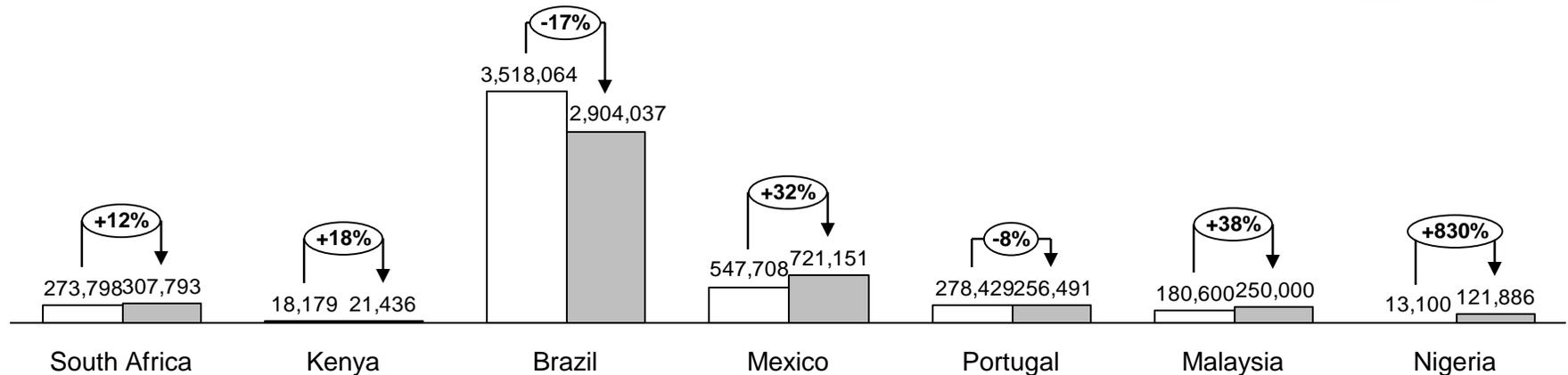
- Increased transacting **convenience** for both merchants and consumers
- **Real economic growth** linked to the efficiency of the underlying payments system through capital formation and accumulation in the banking system



The number of deployed PoS terminals increased significantly between 2010 and 2014

Number of PoS Terminal Units Deployed 2010 and 2014

□ 2010 ■ 2014

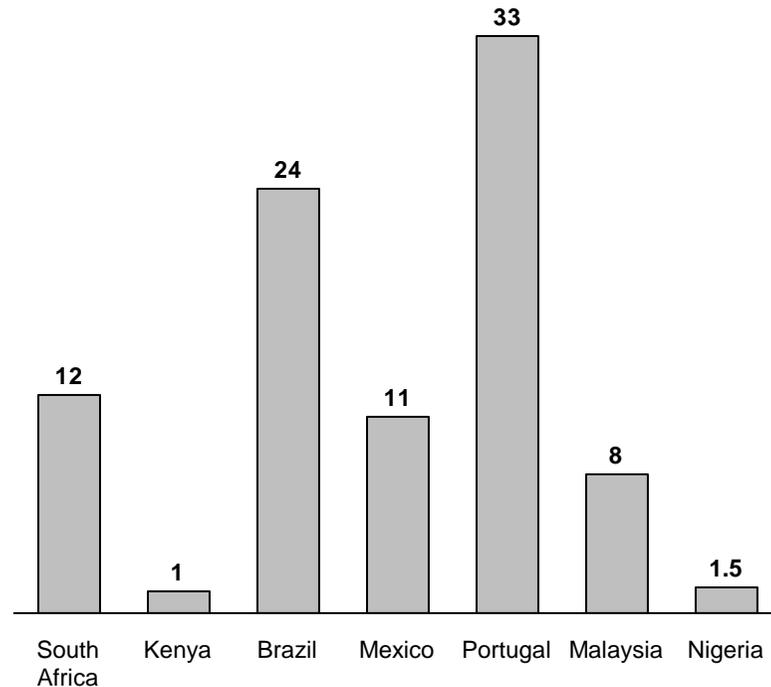


Key Insights

- On average, analysis shows increasing adoption of PoS terminals as a payment channel across the globe
- Malaysia and Mexico recorded the fastest growth in PoS terminals adoption rates between 2010 and 2014 at 38% and 32%, reportedly due to effectiveness of initiatives to increase terminalization of merchants and use of debit cards to pay for utilities and other private services
- While Brazil had the highest number of deployed PoS terminals in 2014, with approximately 2.9 million terminals, the adoption rate regressed negatively by 17% over the period due to a combination of factors including worsening macroeconomic conditions in 2014 and high household indebtedness levels, which resulted in a downturn in consumer confidence and weak retail sales
- Similarly, though having one of the most advanced PoS network systems in the world, PoS adoption appears to have regressed in Portugal by 8%, reflecting the difficult economic situation in Portugal from 2010 and a strong reduction in consumption in 2014
- While Nigeria's PoS business commenced in 2011, a close user group was run by Interswitch in 2010 in which 13,100 PoS devices were deployed . The 830% increase in number of deployed PoS terminals between 2010 and 2014 is thus reflective of substantial adoption, especially when compared to benchmarked countries with a similar age of payment systems such as Kenya

The number of deployed PoS terminals increased significantly between 2010 and 2014

Number of PoS Terminals per 1000 adults (2014)



*Adult here is defined as being 25 years and above

*PoS terminals per 1000 adults is derived by dividing total number of PoS terminals by adult population multiplied by 1000

*Population statistics pertain to 2014

Key Insights

- Further analysis of PoS adoption factors in the effect of population on PoS penetration
- Given the adult population of the selected countries, Portugal has the highest card and PoS penetration rates amongst all the countries reviewed, with an average of 33 PoS machines deployed for every 1000 adults as at 2014; followed by Brazil with 24 terminals per 1000 adults
- While Kenya recorded the second fastest growth rate of PoS adoption at 18%, the country is underleveraged in terms of PoS terminals, having the lowest level of PoS adoption with only 1 PoS terminal per 1000 adults respectively
- Analysis shows an average range of 13 PoS terminals per 1,000 adults across the selected countries and research reveals a range of 22 to 35 per 1,000 in advanced economies**
- With 1.5 PoS terminals per 1000 adults, Nigeria appears to be as underleveraged as Kenya in PoS adoption, performing below the average of 13 PoS terminals per 1000 adults across all seven countries
- It is useful to note that electronic payments were introduced in 2011 in Nigeria, compared to the 1980s in Brazil, 1996 in South Africa, 2004 in Mexico and 2005 in Malaysia & Kenya

**Source: Central Bank of Malaysia 2014, Accelerating the Migration to Electronic Payments

Summary of the adoption rate of PoS services in the benchmarked countries

Analysis reveals significantly higher and increasing adoption levels of PoS services in the countries reviewed. This has been driven by regulation and incentives by governments and other stakeholders involved in the PoS value-chain.

The rate of adoption of electronic payments in Nigeria is commendable given the time span since its introduction, and in comparison to the time spans in the benchmark countries. Electronic payments were introduced in 2011 in Nigeria, compared to the 1980s in Brazil, 1996 in South Africa, 2004 in Mexico and 2005 in Malaysia and Kenya.

However, like much of Sub-Saharan Africa, **Nigeria and Kenya remain severely underleveraged in PoS adoption, and can largely still be described as cash-based economies.** This is evidenced by the size of commercial activities and consumer payments conducted with cash and typically driven by the large informal economy which continues to conduct business solely using cash payments.

The foregoing portrays considerable scope for adoption and significant opportunity for PoS and mPoS providers to extend financial services to these populations.

E

Benchmark Analysis

E.1 Adoption

E.2 Usage

E.3 Regulation

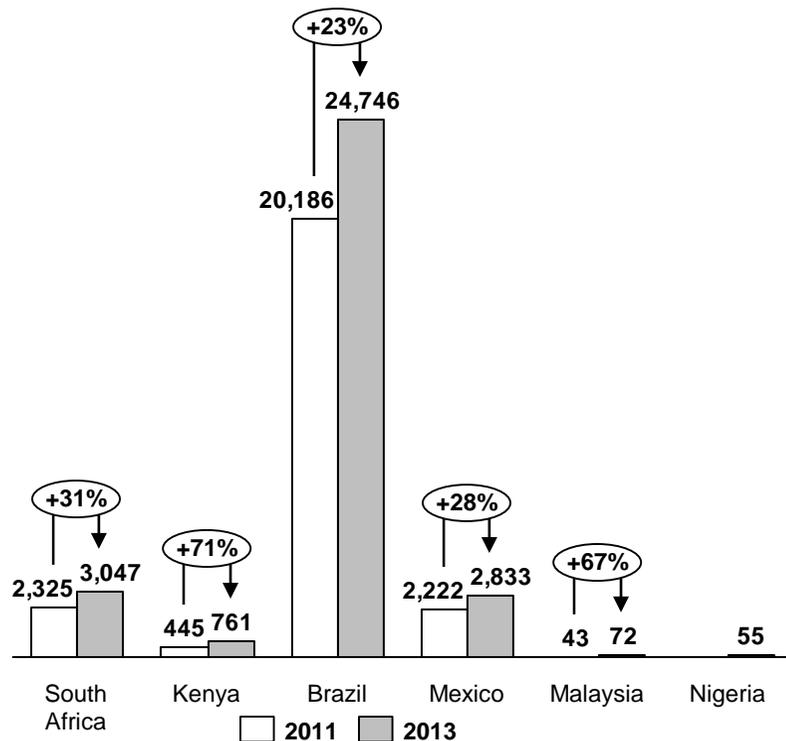
E.4 Key Learning



Research reveals exponential growth of non-cash consumer transactions in some benchmark countries

Cash as a share of consumer payments has been eroded by digital payments. In 2014, digital payments volumes surpassed that of paper-based payment methods.

Growth in Volume of E-payments between 2011 and 2013 (Million)



Key Insights

- Increasing volumes of e-payments indicate increasing use of electronic payment channels and instruments
- Estimates for global non-cash payment transactions totaled 345.7 billion in 2013, driven by a 20.2% increase in developing markets, and 5.6% growth in developed markets
- In the benchmark countries, the most significant growth rate is in Kenya (71%), where innovative mobile payments solutions have included new participants at all income levels in the electronic payments ecosystem
- Malaysia shows impressive growth of 67% in the period under review
- In other developing nations like Mexico, Brazil, and South Africa, the growth in volume of non-cash payments has been strong, at 28%, 23% and 31% respectively, driven by financial inclusion
- However, the majority of transactions in these countries continue to be carried out using cash

*Most recent figures pertain to 2013

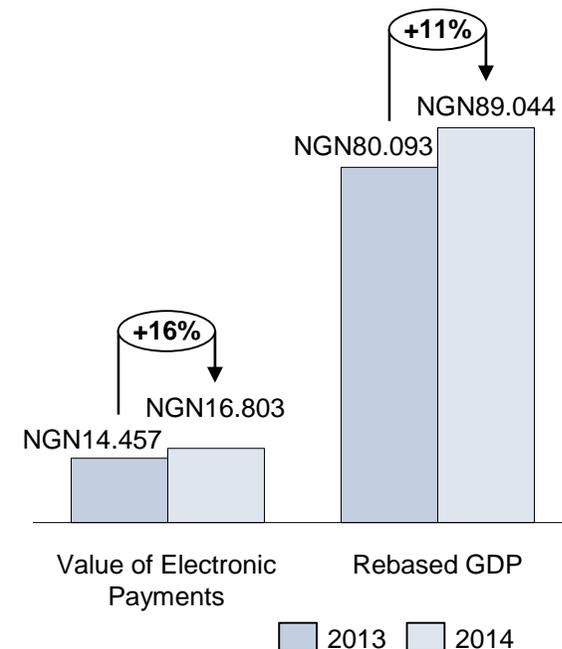
*Figures rounded up to nearest whole number

However, cash remains the preferred method for consumer payments

Though electronic transactions are growing rapidly both globally and regionally, cash remains the leading consumer payment type, accounting for 85% of global consumer transactions.

- Amongst the non-African benchmark countries, Malaysia is highest in cash usage (92.5%), while cash use in Brazil and Portugal are significantly lower at 38% and 25% respectively
- In Africa, cash maintains a stronghold, with very high cash use percentages in South Africa (84%) and Kenya (90%), despite Kenya's reputation for mobile money. Cash use also remains high in transitioning economies such as Mexico at 36%
- In Nigeria, as with the benchmark countries, cash continues to be dominant with 84.4% of consumers in Lagos preferring and using cash to pay for transactions rather than alternative forms of payment
- The rate of growth of electronic payments is faster at 16% than that of GDP at 11%, which may indicate a rise in the use of electronic payments for transactions and a gradual shift from cash to electronic payments
- The persistence in cash use in some of these countries such as South Africa, Kenya and Nigeria, may be symptomatic of a large informal economy and indicative of the need for acceleration of financial inclusion effort and more awareness initiatives

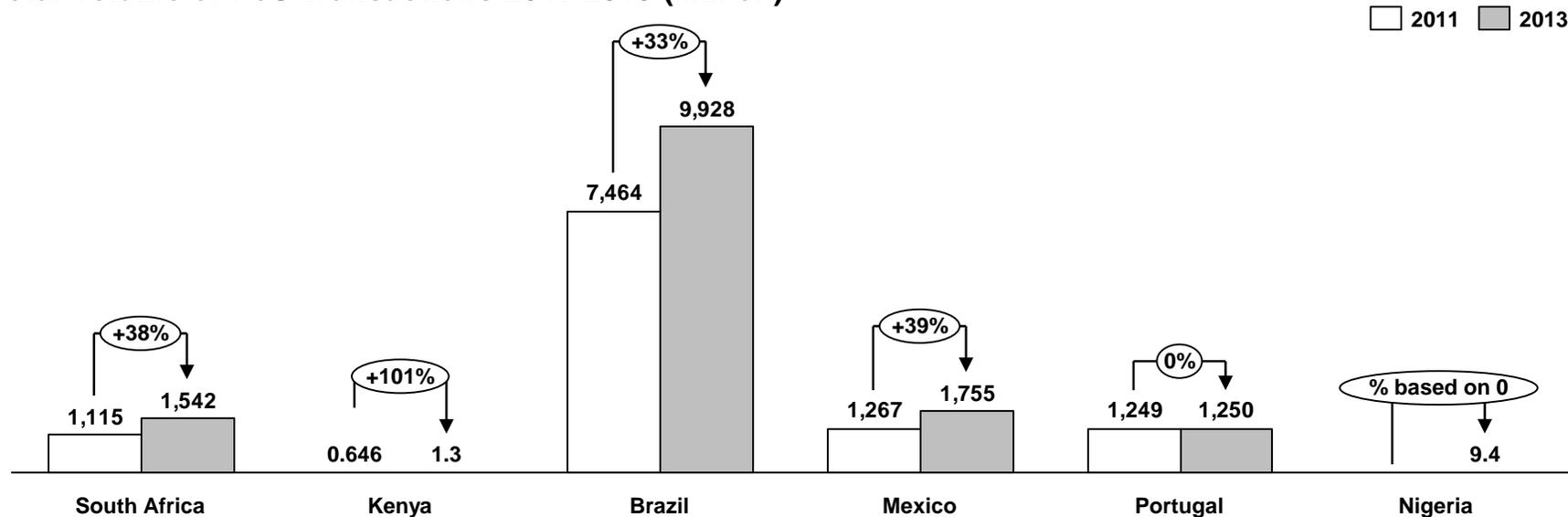
Comparison of Growth Rate of GDP to Value of Electronic Transactions In Nigeria 2013-2014 (Trillion)



Kindly note that total value of transactions could not be ascertained and as such GDP has been used as a proxy for indicating the proportion of cash and non-cash transactions in the economy

Global PoS use is increasing as reflected by growth in the volume of PoS transactions from 2011 to 2013

Total Volume of PoS Transactions 2011-2013 (Million)



Key Insights

- Analysis reveals increasing volumes of PoS transactions across the board, which indicates growing use of PoS as a payment channel globally
- In Kenya, the growth trajectory is exponential with compound growth of 101% in the period under review
- South Africa, Brazil and Mexico also portray substantial growth of 38%, 33% and 39% respectively
- Analysis of compound growth is not possible for Nigeria as the country's PoS business began in 2011. However, Nigeria's performance based on the volume of PoS transactions in 2013 is significant at 9.4 million transactions within two years of formally introducing this payment channel

*Most recent figures pertain to 2013

Summary of PoS usage in the benchmarked countries

Benchmarking has facilitated charting of the growth of non-cash payments in the selected countries. Analysis reveals considerable growth, with compound growth rates of as high as 67% in some countries (Malaysia), the lowest still being significant at 23% in Brazil.

Increasing global non-cash transaction volumes indicate growing use of non-cash payment methods, of which card and PoS payments make up the fastest growing segments. Growth in usage is driven by improved payments infrastructure in these transitioning and developing markets, along with regulatory initiatives to increase non-cash usage, roll out of innovative payment solutions such as mobile payments and mPoS, and increasing popularity of cards as a payment instrument.

Analysis provides a big picture perspective on **Nigeria's performance in comparison to the selected countries**, and reveals **moderate acceptance levels at 9.4 million transactions**, given the recent period of introduction of PoS as a mode in the country's payments system

E

Benchmark Analysis

E.1 Adoption

E.2 Usage

E.3 Regulation

E.4 Key Learning



Governments and their Central Banks regulate electronic payments (1/3)

Country

Regulation

South Africa

E-Money Position Paper (2009) – having legal basis in the National Payment System Act 78 (1998), the South Africa Reserve Bank provides regulatory adjustment and intervention for electronic products in its E-Money Position paper (2009). The defined guidelines are in regards to:

- **Issuers** - only participants in the **South African Multiple Option Settlement System (SAMOS)** are allowed to issue electronic money
- **Redemption of electronic money** – banks are obligated to redeem the electronic value held on the instrument on demand
- **Interoperability of electronic money** – an e-money payment clearing house may be established by the Payments System Management Body (PASA) to ensure interoperability and appropriate rules for clearing and settlement of e-money transactions between settlement system participants/banks

Malaysia

Payment Card Reform Framework (2014) – pursuant to the Financial Services Act (FSA)(2013), the Payment Card Reform Framework prevents indiscriminate increases in interchange fees to provide an enabling environment for wider deployment, acceptance and usage of PoS terminals and payment cards. It defines the interchange fee ceiling for domestic debit and credit card transactions to not exceed 0.15% and 1.10% of the value of the transaction. In addition to the above legislation, several guidelines were issued to promote safety and soundness of the e-payments system including:

- **Guidelines on electronic money (2008)** – imposes a limit on large e-money schemes
- **Credit Card Guidelines (2011)** – outlines measures that issuers and acquirers must adopt to mitigate credit card fraud

Governments and their Central Banks regulate electronic payments (2/3)

Country	Regulation
Kenya	<p>National Payment Systems Regulation (2014) – is the most recent legal framework for electronic instruments, especially mobile money. Its notable features include:</p> <ul style="list-style-type: none"> ▪ Risk management – operators are required to comply with international standards on payments and settlement systems, in addition to any other technical standards that the Central Bank of Kenya prescribes ▪ Non-exclusive dealings with agents – thus empowering agents to seek contracts with multiple service providers ▪ Interoperability – provides for a Payment Service Provider Management Body to act as a clearing and settlement house for mobile money transactions operated by payment service providers
Brazil	<p>Resolutions Nos. 4,282 and 4,283; Circulars Nos. 3,680, 3,681, 3,682 and 3,683 (2013) – Issued by the Brazilian Monetary Council and the Central Bank of Brazil, these series of resolutions institute the initial regulatory framework which regulates the authorization and operation of payment institutions and payment arrangements. The main issues addressed in these rules include Interoperability, Non-discriminatory Access, Regulatory oversight of fees.</p> <p>The key provision of the bill is the definition of a new category of “payments institutions” that falls under Central Bank supervision, encompassing a range of providers, including mobile money providers (not limited to Telco’s involved in the payment process), digital wallet providers, card companies, merchant acquirers, and banks that want to offer mobile payments</p>

Governments and their Central Banks regulate electronic payments (3/3)

Country

Regulation

Mexico

SPEI Regulations in Central Bank Circular 17/2010 – prescribes the operating rules for participants in Mexico’s interbank electronic payment system – Sistema de Pagos Electrónicos Interbancarios (SPEI). These rules include criteria to act as a participant and provider of electronic payments services and rules for processing and settlement of transfer orders

SHCP, CNVB and Central Bank Regulations – provide the legal framework for financial transactions over mobile phones. The Central Bank also published guidelines on Discount Rates and Interbank Fees on Bank Card and PoS Payments. It defines the interbank transaction clearance and settlement process; and disseminates the fees and commissions chargeable by banks on card transactions

Portugal

Decree-Law No. 317 (2009) of the Central Bank* – constitutes the legal framework governing participation in the business of payment institutions and the provision of payment services. It was amended by Decree-Law n.º 242/2012 of 7 November 2012, which regulates the taking up of the business of electronic money institutions, the provision of electronic money issuance services and their prudential supervision, transposing into Portuguese law Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009.

**Published in Portuguese only*

Over the years, CBN has published guidelines and regulations in the shift towards a cash-lite economy

Cash-Lite

Guidelines of Electronic Payments of Salaries, Pensions, Suppliers and Taxes in Nigeria – Feb 2014

These guidelines were set out to provide all stakeholders with the operational procedures and regulations that guide end-to-end electronic payment of all forms of Salaries, Pensions, Suppliers and Taxes in Nigeria, to reduce the time and transaction costs due to cash payments

Guidelines on Electronic Banking & Payment Services – Aug 2003

- The Guidelines were developed to inform the conduct of financial institutions in e-banking and electronic payments delivery.
- Defines technology, privacy, and security standards on ATM machines, PoS devices, Card schemes, and Internet banking amongst others etc

Payments System Vision 2020 – Mar 2007, Sep 2013

- Payments System Vision 2020 (PSV2020) was launched in March 2007, and formally reassessed in September 2013.
- The initial version carried the overall objective to make electronic payment systems nationally utilized, and identified seven specific initiatives to promote adoption and usage of electronic payments
- The 2013 revision develops key recommendations and initiatives to address deficiencies for a more resilient electronic payment system

Other Regulations Include:

- Cumulative cash withdrawals and lodgments threshold
- Maximum cap on cheques
- Card fraud prevention strategies
- Implementation of mobile money operations
- Payment System Management Bill
- Guidelines on Transaction Switching Services
- Regulatory Framework on Mobile Payments Services in Nigeria
- Operational Rules and Regulations for the National Central Switch
- Guidelines on PoS card Acceptance Services etc

Summary of the regulation of PoS services in the benchmarked countries

The global research on regulation to promote the use of Point-of-Sale (PoS) terminals highlights Nigeria's performance in the area of regulation and reform in payments system.

Like the selected countries, Nigeria clearly defines and expresses the roles and responsibilities of participants in the payments space, as well as technical standards to govern the operation of e-payment services.

Nigeria, similar to Mexico, publishes guidelines and imposes a ban on cash withdrawals to discourage excessive use of cash.

However, an area of **regulation that appears to require improvement in Nigeria is the harmonization of industry risk management guidelines**, that govern operations in the electronic payments space. While the CBN has published guidelines and technical standards to manage risks associated with electronic payments, these are all currently expressed in a number of fragmented circulars.

Benchmarking highlights the need for these guidelines to be harmonized into a consistent policy that is readily accessible within a single document, effectively publicized as to ensure maximum awareness among the relevant stakeholders, and enforced to encourage user confidence in the PoS system

E

Benchmark Analysis

E.1 Adoption

E.2 Usage

E.3 Regulation

E.4 Key Learning

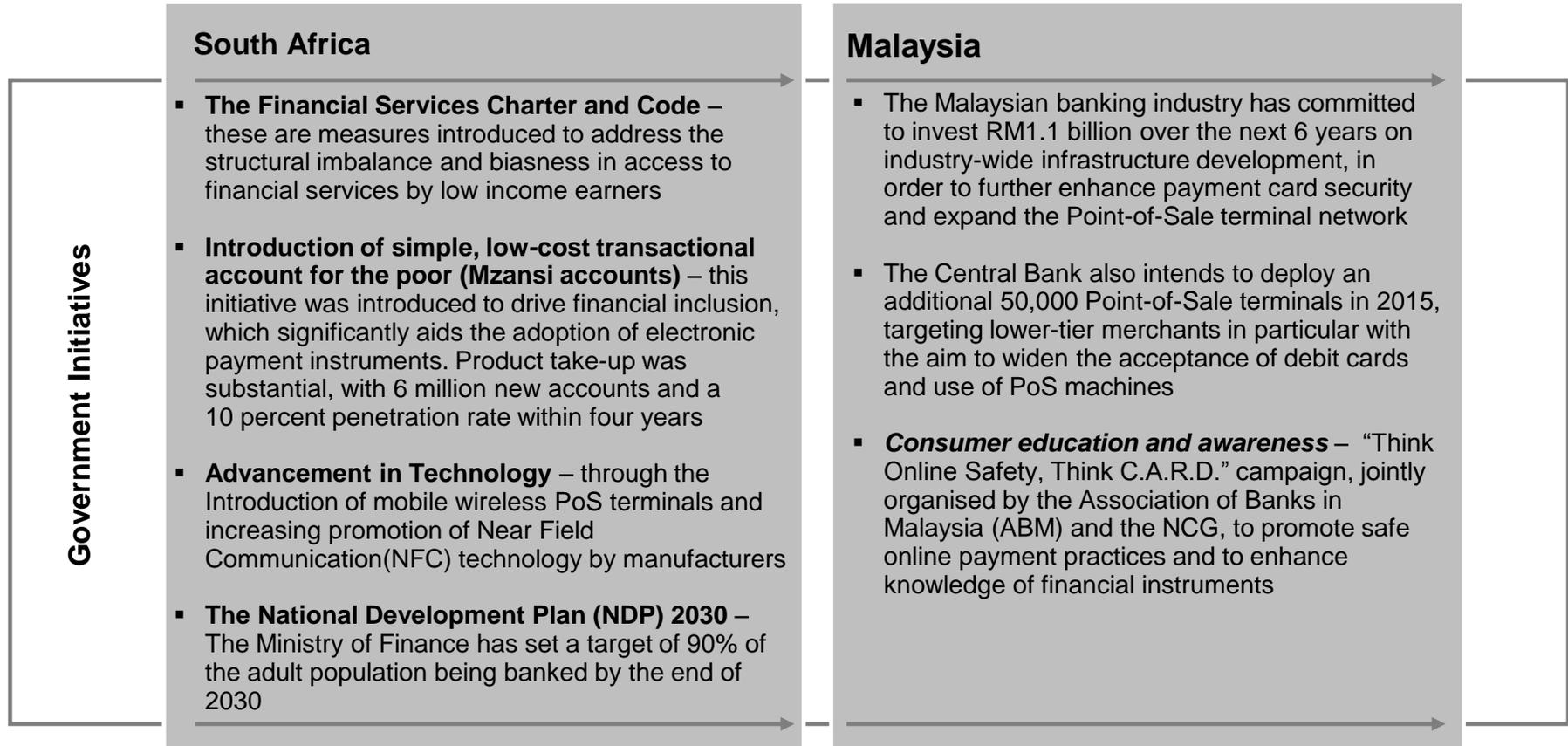


Benchmarking reveals the issues most detrimental to PoS adoption and use in the selected countries

Security of the payment system ie concerns about risk management	Connectivity Difficulties	Inability of and resistance from some users to use PoS due to lack of education, awareness and confidence
<ul style="list-style-type: none"> ● Brazil ● Portugal ● Nigeria 	<ul style="list-style-type: none"> ● Kenya ● Nigeria 	<ul style="list-style-type: none"> ● Mexico ● Kenya ● Nigeria
<ul style="list-style-type: none"> ● Kenya 	<ul style="list-style-type: none"> ● South Africa 	<ul style="list-style-type: none"> ● Malaysia
<p>Infrastructure sharing by providers and integrated payment systems</p>	<p>High merchant terminal/card transaction fees</p>	<p>Limited infrastructure and system readiness</p>

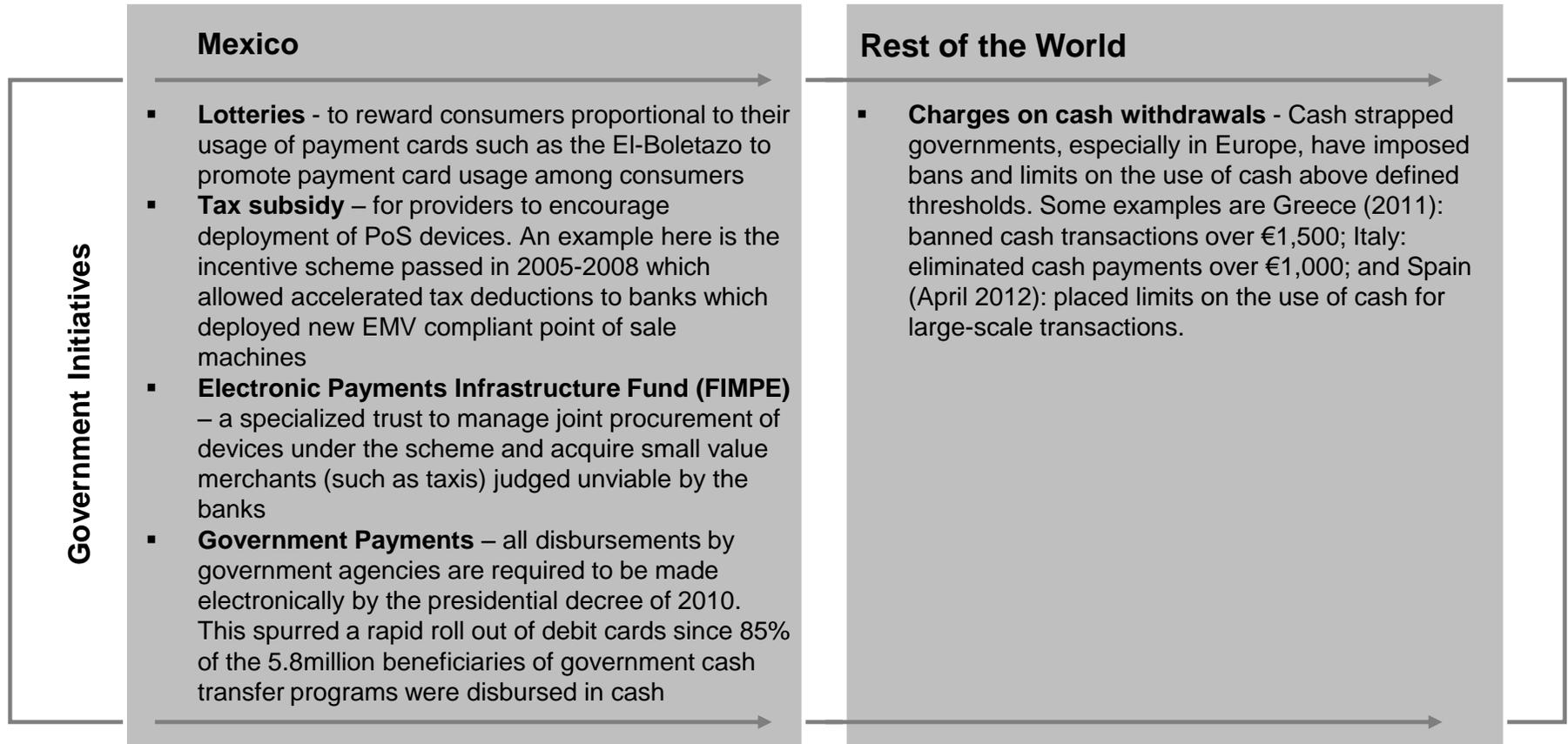
Some governments have introduced several initiatives and incentives to encourage the use of electronic payments (1/2)

In recent years several countries have initiated regulatory measures to persuade both buyers and sellers to reduce their use of cash, and encourage electronic payment systems.



Some governments have introduced several initiatives and incentives to encourage the use of electronic payments (2/2)

In recent years several countries have initiated regulatory measures to persuade both buyers and sellers to reduce their use of cash, and encourage electronic payment systems.



Card processing companies are making efforts to encourage card usage at the Point of Sale

Card processing companies in developing countries are making efforts to encourage card usage by incentivizing customers to use their cards more through:

- **Loyalty programs** – that offer the opportunity to earn points or cash back the more often the card is used. In time, this is expected to help educate them on the convenience and security of using their cards at the point-of-sale, gradually increasing users' trust and creating mass-market acceptance
- **Explaining the benefits of paying by card instead of cash** – card processing companies are encouraging retailers to explain the benefits of paying by card instead of cash at the time of purchase. Retailers stand to benefit from higher sales totals at the point-of-sale (PoS) and a move towards increased electronic cash handling. Running in parallel is the effort to communicate with customers to educate them about the benefits of using their cards to make payments at the point of sale
- **EMV contact and contactless chip technology** – Visa in particular is pushing for the adoption of this type of dual-interface chip technology to help prepare payments infrastructure in countries for the introduction of NFC-based mobile payments, which would also improve international interoperability and security



Key Learning Summary Slide

In analyzing the challenges to PoS adoption and the impact of key regulatory and industry initiatives taken to overcome these challenges, a number of successes can be identified in the Nigerian case. In Nigeria, acquirers/banks are required to bear the cost of procuring the PoS device, allowing merchants to forego this cost and encouraging adoption. However, drawing parallels between Nigeria and the benchmarked countries reveals other challenges, as well as areas of learning to inform Nigeria's approach.

Challenges

- The major challenges appear to be concerns about the security of electronic payment systems and the inability of some users to operate PoS, both producing a resistance of mass populations to electronic payment channels
- In Nigeria however, the foremost issue is connectivity difficulties, reported by stakeholders in the value chain as the foremost challenge to the PoS business in the country

Solutions

- Government and stakeholder investment in infrastructure development and financial inclusion eg Mzansi accounts in South Africa and EMV contact and contactless payments cards by Visa
- Greater collaboration among stakeholders & especially with telecommunication companies to prioritize PoS

A few areas of learning however can be identified to inform Nigeria's approach to pushing electronic payments adoption in the country. These include:

- A stronger focus on the financial inclusion strategy and investment in communications infrastructure development as well as the expansion of the PoS terminal network
- Launching or acceleration of projects such consumer awareness drives and fraud management in order to allay security concerns and meet expectations of users

F

Recommendations

- F.1 To Increase Adoption
- F.2 To Increase Usage
- F.3 To Strengthen Regulation
- F.4 To Improve Operations



To increase PoS adoption, CBN and NIBSS should at a minimum:

Adoption

1. Increase awareness and sensitization initiatives

All stakeholders, especially the regulator must deepen initiatives that help market participants to better understand the benefits of and charges for transacting via PoS terminals. This is especially critical to the informal economy where open market stalls and low value retailing currently predominantly rely on cash

2. Communicate improved security features of PoS to all

The Central Bank of Nigeria made it mandatory for all Debit/Credit cards in the country to be EMV smart i.e. chip and PIN. However, many consumers are unaware of the features and/or benefits and as such, do not appreciate the improved security features and consequently do not trust or use PoS/Debit cards

3. Continue to make cash unattractive to consumers and merchants

CBN should continue to drive initiatives that make cash unattractive and promote the use of alternative payment channels. Current charges for depositing and withdrawing large amounts discourage the use of cash and such policies should continue to be promoted in order to encourage non-cash payment options

4. Review selection criteria to increase number of businesses that qualify for PoS

All businesses that frequently accept payments must be encouraged to deploy PoS terminals and accept card payments. As such, CBN must impress upon banks and if required, incentivize them to accommodate and deploy PoS terminals to lower value or more informal businesses to increase PoS adoption and usage

5. Review PTSP operations and business model

Merchants are not being served or acquired sufficiently by PTSPs and PTSPs complain that their service is not profitable. There is therefore a need to review the operations and business case for PTSPs in order to gain the spread and service that is urgently required to increase PoS adoption

To increase PoS usage, CBN and NIBSS should at a minimum:

- 1 Improve technical functions and resolve network connectivity issues**

It is critical for the relevant stakeholders to improve network connectivity in order to minimize declined transactions and improve the functioning of PoS terminals. Telcos assert that LAN is the best connectivity method and this must be reviewed to check if full deployment is possible along with international SIMs
- 2 Focus on deployment of PoS to informal/open/unstructured markets**

Having a large segment of the population engaged in the informal economy, it is important to promote an initiative that will drive adoption in these markets and thus promote usage of PoS. It may be important to deploy PoS terminals with longer battery life to cater to the realities of poor access to power in markets
- 3 Improve resolution timeframe for PoS complaints**

Improving the timeframe for resolving PoS complaints will increase confidence in PoS as a payment system and allay the fears of consumers who are currently concerned about the security of their funds and the safety of using PoS
- 4 Optimize PoS process: review all stakeholders' involvement in the PoS process**

Banks cite the high number of stakeholders involved in the processing and reconciliation of PoS transactions as a major hindrance to speedy processing and reconciliation. It is therefore pertinent to review the process for optimum delivery of PoS transactions and speedy resolution of issues
- 5 Increase awareness on incentive schemes**

Responses from the surveys suggest that incentivizing sales assistants to use PoS increases their desire to use the terminals already deployed. As such, incentive schemes which have already been approved and are being deployed should be publicized to deepen usage

To strengthen the regulatory environment, CBN should:

Enforce service standards and resolution timelines

In its role as enforcer, CBN must impose minimum service delivery standards for all providers in the electronic payments eco-system, to ensure a base quality of service and reduce variations in services provided by various participants. In addition, CBN should include resolution timelines to guide fulfilment of service obligations and consequences for failure



Harmonize all risk management circulars into a singular framework

CBN must collate into a single policy document, all established industry-wide guidelines for identifying, assessing, managing and controlling the risks associated with electronic banking and electronic money/payments. CBN must also effectively communicate this document to all stakeholders in the electronic payments ecosystem to ensure awareness



Minimize or eliminate policy reversals

Policy reversals were identified as the major hindrance to growth in use of PoS services, by 80% of banks who responded to the operators survey. CBN must minimize reversals of instituted policies governing payments, and effect a more stringent process for reversing vetted policies. This would build confidence in and improve the system



To improve operations:



CBN should implement service standards for the industry and enforce disciplinary measures for erring operators and their failure to meet set standards

NIBSS should improve consistency of PoS data reports given to banks to aid the reconciliation process, and also improve upon the support framework to processors

Banks should improve the reconciliation process for PoS payments

PTSPs should enhance the support provided to merchants and improve on their timeline for PoS complaints resolution to increase confidence in the system

Card Processors should improve the quality of settlement data provided to banks and merchants

Telecoms Companies should invest in communications infrastructure to improve network connectivity and prioritize PoS data for smoother PoS transactions

G

Appendix

G.1

Methodology of Study

G.2

More of Survey Findings

G.3

Acronyms and References



Methodology of study

Primary Research: Market Perspectives

- **Surveys** – Two sets of survey questionnaires were developed and administered to obtain responses from consumers and merchants in the twenty Local Government Areas of Lagos state (*more details provided on next page*)
- Of 1500 merchants surveyed, 1426 responses were received – a response rate of 95%
- While 2000 customer surveys were proposed, 2019 responses were received – a response rate of 101%
- **Case Studies** – studies of structured and unstructured (open) market places were also conducted in order to develop cases that reflect PoS activities in both environments. A total of 132 business were surveyed to develop insights for the cases
- **About respondents** – Surveys were administered to merchants in target areas, and to customers using the KISH grid method of targeting households within enumeration areas of the state

Primary Research: Operator Perspectives

- Surveys were also conducted to obtain the perspectives of all stakeholders in the PoS business. These include
 - **CBN** – 100% response rate
 - **NIBSS** – 100% response rate
 - **PTSPs** – 31% response rate of 13 PTSP organizations surveyed
 - **Card Processors**– 100% response rate of 2 processors surveyed
 - **Banks** – 21.7% response rate of 23 banks surveyed
 - **Telecommunications Companies** – 40% response rate of 5 service providers surveyed

Primary Research: List of Operators Who Provided Responses/Perspectives

- Regulator: CBN
- Aggregator: NIBSS
- Banks: FCMB, Stanbic IBTC, Access Bank, Keystone Bank and Jaiz Bank
- PTSPs: Netop Business Systems, Globasure, Global Accelerex, Citi-Serve Ltd
- Card Processors: Interswitch and Unified Payments
- Telecommunications Companies: Etisalat and Airtel

Secondary Research

- The study leverages on existing data obtained from reputable sources including Central Banks, database organizations such as the World Bank, as well as the analysis of pre-existing raw data
- Secondary research compares national findings to global benchmarks in order to further identify gaps and outline recommendations
- In benchmarking, adult population is categorized as 25 years and above in line with its categorization in various world database sources such as CIA World Fact Book

The National Bureau of Statistics conducted the primary research of consumers and merchants in Lagos State

Consumer Survey

No. LGAs in Lagos	Total EAs	Selected EAs	HH Selected
1 Agege	925	9	90
2 Ajeromi Ifelodun	1365	11	110
3 Alimosho	3837	27	270
4 Amuwo-Odofin	1051	8	80
5 Apapa	723	6	60
6 Badagry	825	7	70
7 Epe	528	9	90
8 Eti-Osa	1032	8	80
9 Ibeju/Lekki	524	5	50
10 Ifako-Ijaye	1439	12	120
11 Ikeja	854	7	70
12 Ikorodu	1955	11	110
13 Lagos Island	1530	12	120
14 Kosofe	490	4	40
15 Mainland	855	7	70
16 Mushin	1270	10	100
17 Ojo	2101	17	170
18 Oshodi-Isolo	1699	14	140
19 Shomolu	790	7	70
20 Surulere	1080	9	90
Total	24,873	200	2,000

- Questionnaires for consumers (households) were prepared by AGPartnerships Ltd and approved by NIBSS
- The selection of enumeration area and survey administration were handled by the National Bureau of Statistics (NBS) using a KISH grid method
- Probability proportional to the size of enumeration areas was adopted such that the number of EAs selected varies according to the size of the Local Government Area
- A total of 20 EAs were selected and then ten households were selected per EA to give a total of 2,000 HHs surveyed
- Of the 2,000 HH surveyed, responses were received from 2,019 giving a response rate of 101%

LGA – Local Government Area
 EA – Enumeration Area
 HH –Household
 NBS – National Bureau of Statistics

The National Bureau of Statistics conducted the primary research of consumers and merchants in Lagos State

Merchant Survey

Sector	% of Total Response
Wholesale trading	26.40%
Retail trading	18.90%
Religious institution	0.90%
Fuel station	9.80%
Fast food/restaurant	15.30%
Hotel/Guest house	19.30%
Pharmacy	5.80%
Airline/Travel agent	0.40%
Bureau de Change	0.30%
Government Agency	1.90%
Others	0.10%

- Questionnaires for merchants (establishments) were prepared by AGPartnerships Ltd and approved by NIBSS
- The NBS NISE frame for Lagos State was used for the selection of merchants and NBS conducted the survey administration
- A total of 1,500 merchants were surveyed a total of 1,425 responses were received i.e. a 95% response rate

LGA – Local Government Area
 EA – Enumeration Area
 NBS – National Bureau of Statistics
 NISE – National Integrated Survey of Establishments

More about the countries in the global benchmark analysis for PoS adoption and usage

South Africa



- **Continent:** Africa
- **GDP:** USD 350.7 Billion
- **Population:** 54 Million
- **Proportion of banked adults:** 53.6% (28.9 Million)
- **Number of PoS terminals deployed (2014):** 307,793

Portugal



- **Continent:** Europe
- **GDP:** USD 227.3 Million
- **Population:** 10.48 Million
- **Proportion of banked adults:** 81% (8.4 Million)
- **Number of PoS terminals deployed (2014):** 256,491

Kenya



- **Continent:** Africa
- **GDP:** USD 53.4 Billion
- **Population:** 45 Million
- **Proportion of banked adults:** 42.3% (19 Million)
- **Number of PoS terminals deployed (2014):** 21,436

Mexico



- **Continent:** South America
- **GDP:** USD 1260.9 Billion
- **Population:** 122.3 Million
- **Proportion of banked adults:** 27.4% (33.5 Million)
- **Number of PoS terminals deployed (2014):** 721,151

Brazil



- **Continent:** South America
- **GDP:** USD 2245.7 Billion
- **Population:** 202.7 Million
- **Proportion of banked adults:** 55.9% (113.3 Million)
- **Number of PoS terminals deployed (2014):** 2,904,037

Malaysia



- **Continent:** Asia
- **GDP:** USD 313.2 Billion
- **Population:** 30.3 Million
- **Proportion of banked adults:** 66.2% (20.1 Million)
- **Number of PoS terminals deployed (2014):** 250,000

More about Nigeria for PoS adoption and usage

Nigeria



- **Continent:** Africa
- **GDP:** USD 407.9 Billion
- **Population:** 177 Million
- **Proportion of banked adults:** 36.3% (33.9 million)
- **Number of PoS terminals deployed (2014):** 121,886

*Rebased GDP



G

Appendix

G.1 Methodology of Study

G.2 More of Survey Findings

G.3 Acronyms and References



More on the survey of merchants

- **Sex of respondents:** 61% are male and 39% are female
 - **Type of respondents:** primarily Business Managers (40%), and also includes Business Owners (14%), Sales Assistants (23%), and others (23%)
-
- **Business Type:** Wholesale Trading (26%), Retail Trading (19%), Hotel/Guest House(19%), Fast Food/Restaurant (15%), Fuel Station (10%), Pharmacy (6%), Government Agency (2%), Religious Institution (1%), and Others (1%)
 - **Business Location:** High Density Urban Centre (50%), Medium Density Urban Centre (44%), Low Density Urban Centre (5%) And Rural Community (1%)
 - **Structure of Business Location:** Large Self-contained Building (61%), Small Self-contained Building (23%), Business Within A Shopping Mall (14%), Business Within A Market (2%), And Others (1%)
 - **Number of Employees:** the majority are small businesses with 1-10 employees (63%), while others are larger businesses with 11-20 employees (27%), 21-30 (4%), 31-40 (2%) and greater than 40 (4%)
-
- **PoS Terminal Communication Channel:** GPRS (34.4%), CDMA (33%), don't know (24.2%), WIFI (4.3%) and LAN (4.1%)
 - **Preferred Card Type for PoS Transactions:** Mastercard (20.4%), Verve (8.5%), Visa (7.2%), More than once (3.8%), others (3.6%) and International Cards (1.0%)
 - **Level of Satisfaction with Service and Support from PTSPs and Banks:** Excellent (1%), Very Good (12.9%), Good (41.5%), Average (39%), and Poor (5.7%)

More on survey of consumers

- **Age of respondents:** 18-25 years (15.4%), 26-35 years (33.1%), 36-45 years (25.4%), 46-55 years (13.4%), over 56 years (12.1%)
- **Type of respondents:** primarily Business Owners (63.6%), and also includes Private Sector Employee (14.7%), Public Sector Employee (6.8%), Student (6.3%), Unemployed Person (5.6%), and others (2.9%)

- **Monthly Income of Respondents:** no income (15.5%), less than NGN50,000 (49.8%), NGN50,001-NGN100,000 (29.1%), NGN100,001-NGN250,000 (4.9%), NGN250,001-NGN500,000 (0.5%), and above NGN500,000 (0.2%)
- **Do you have a Bank Account?:** Yes (90.2%), No (9.8%)
- **Do you have a Bank Verification Number (BVN)?:** Yes (57.5%), No (42.5%)
- **Do you have a Debit/Credit (ATM) Card?:** Yes (70.4%), No (29.6%)
- **Number of Debit/Credit (ATM) Cards:** 1 (69%), 2 (24.6%), 3 (4.7%), while 1.7% have as many as 4 debit/credit (ATM) cards
- **Debit Card Type Preferred for Use in Nigeria:** Mastercard (57.8%), Visa (27.4%), Verve (14.3%), International Cards (0.2%) and others (0.2%)

Analysis of the stakeholder surveys reveals additional findings

Additional Findings

CBN	<ul style="list-style-type: none"> ▪ CBN's time frame for resolving PoS complaints is two to three days ▪ CBN runs consumer campaigns and a loyalty scheme to increase consumer awareness, and conducts periodic surveys to measure customer satisfaction
NIBSS	<p>To improve the PoS service, transaction processing times, and manage risk of PoS use, NIBSS:</p> <ul style="list-style-type: none"> ▪ Urges acquirers to give priority to LAN, WiFi, and CDMA as PoS terminal communication technology; ▪ Is introducing GTMS, a more efficient PoS Terminal Management system; ▪ Plans to re-certify all PoS terminals and Terminal applications for quality, security and efficiency assurance; ▪ Operates a Fraud Reporting and Information Dissemination portal for the industry; and recently launched Heimdall - an online real-time electronic fraud detection, prevention, and reporting management system
Banks	<ul style="list-style-type: none"> ▪ For 60% of respondents, it takes over 2 years to recoup the investment in a PoS terminal; and 40% say that it takes between 1 and 2 years to recoup these investments ▪ The most significant contribution of PoS to bank business has been improved customer convenience (60%) and increased number of customers served daily (40%) ▪ 100% of respondents determine the number of terminals to be distributed to each business via business assessment by bank officials, while some respondents (40%) also decide this number based on transaction volume

Additional Findings

PTSPs	<ul style="list-style-type: none"> ▪ Each PoS terminal costs between N60,000 to N68,000 ▪ In addition to deployment fees, 100% of the processors charge additional fees for maintenance, repair/servicing, and customization of PoS applications ▪ Processors are also able to identify and track issues with PoS terminals before merchants call to report them ▪ 50% assign between 101-250 merchants to each customer/technical service team, while 25% assign as many as 501-1000
Processors	<ul style="list-style-type: none"> ▪ Processors explain that transactions are declined even when an account is funded due to poor interconnectivity, and routing and confirmation challenges ▪ Processors charge merchants a fee of 0.1%-0.5% on each transaction ▪ They also report challenges due to rising transaction volumes such as transaction spooling on CTMS which becomes difficult to complete

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Appendix

G.1 Methodology of Study

G.2 More of Survey Findings

G.3 Acronyms and References



Acronyms

ATM	Automated Teller Machine
BIS	Bank of International Settlements
BVN	Bank Verification Number
CAGR	Compound Annual Growth Rate
CBA	Core Banking Application
CBN	Central Bank of Nigeria
CDMA	Code Division Multiple Access
CIT	Cash-in-Transit
CTMS	Code Division Multiple Access
EA	Enumeration Area
EFT	Electronic Funds Transfer
EMV	Europay, Mastercard and Visa
EPIS	Electronic Payments Incentive Scheme
ESCA	Electronic Smart Card
FCT	Federal Capital Territory
FIMPE	Electronic Payments Infrastructure Fund (Fondo de Infraestructura de Medios de Pago Electronicos)
GPRS	General Packet Radio Service

HH	Household
LAN	Local Area System
LGA	Local Government Area
MSC	Merchant Service Charge
NBS	National Bureau of Statistics
NDIC	Nigeria Deposit Insurance Corporation
NEFT	NIBSS Electronic Funds Transfer
NFC	Near Field Communication
NIBSS	Nigeria Inter-Bank Settlement System
NISE	National Integrated Survey of Establishments
NSE	Nigeria Stock Exchange
PoS	Point of Sale
PTSA	Payment Terminal Service Aggregator
PTSP	Payment Terminal Service Provider
RTGS	Real Time Gross Settlement System
USD	United States Dollar
VAS	Value Added Service
VPN	Virtual Private Network

Definition of Terms

Consumer	Any person aged 18 years or above with the potential/ability to transact business
Deposit Money Banks	Commercial banks and other financial institutions
EMV	EMV (Europay, MasterCard, Visa) is the global standard that is helping ensure smart (Chip-and-PIN) cards, terminals and other systems can interoperate.
Hot List	List of deactivated cards reported missing, stolen or suspected of fraud by card holders
Interconnectivity	The ability for reciprocal exchange of transactions/messages between two or more switching networks
KISH Grid	A selection table used to determine which members of a household to interview
Merchant	An organization or operator of a business
Merchant Acquirer	CBN licensed financial or non-financial institution that has agreement with relevant card scheme to contract with merchants to accept payment cards as means of payment for goods and services
Processor	Processes card transactions
Switch	A system that switches card payments messages between acquirer (or acquirer processor) and issuer (or issuer processor)
T+ 1 Settlement	The T+1 settlement rule is designed to ensure that businesses that accept payments through Point of Sale (PoS) devices are settled, that is, have the entire value of their previous day's sales in their bank accounts in any Nigerian Bank on a next day basis.

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