



Development Results
Focused Research Program

Country Diagnostic: Nigeria

by Ahmed Dermish, Bankable Frontier Associates



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This diagnostic measures the current state of the transition from cash to electronic payments by estimating volumes and values of payments made in Nigeria, as well as assessing the likelihood of further movement by looking at payment use cases associated with each key shift stage. In so doing, the diagnostic identifies specific examples of attempts to shift from cash to electronic payments that could generate lessons for Better Than Cash Alliance (“Alliance”) stakeholders in other contexts. It also identifies gaps in the available data. Filling these gaps could provide valuable insights for designing and monitoring additional efforts to shift. **This country plan recommends one case study and two additional measurement activities be executed in Nigeria during the Development Results Focused Research Program (DRFRP) in 2013-2014.**

NIGERIA PROJECT TEAM

The diagnostic process involves desk research and an in-country mission by a team of experts to gather data, assess the incentives of participants in the local payments context, and survey the insights of local Alliance champions and stakeholders. Each diagnostic country team includes local researchers with experience in the payments system and knowledge of relevant institutions and individuals. Content and data in this document are based on information gathered during the third quarter of 2013, and therefore represent data prior to this date.

This report was authored by the Nigeria country project team:

- Country Director: Ahmed Dermish
- Measurement Expert: Daryl Collins, Brian Loeb
- Payments Expert: Johann Bezuidenhout
- Country Support: Chidozie Uruakpa, Jelilat Mustapha

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Thanks also to the Bill & Melinda Gates Foundation who provided access to the numbers collected and analyzed as part of a broader study on digitization of government payments in Nigeria in 2013. This enabled us to incorporate a better set of numbers than would otherwise be possible in the limited scope of the Alliance diagnostics. It was also especially helpful to be able to refer to the MasterCard Advisor's *Cashless journey* report for Nigeria as a cross check and comparison.

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Better Than Cash Alliance Vital Signs

Total # of payments
per month

3.14 billion

% payments electronic
(by volume)

1.6%

Data Quality Index
(Scale of 5=highest; 1=lowest)

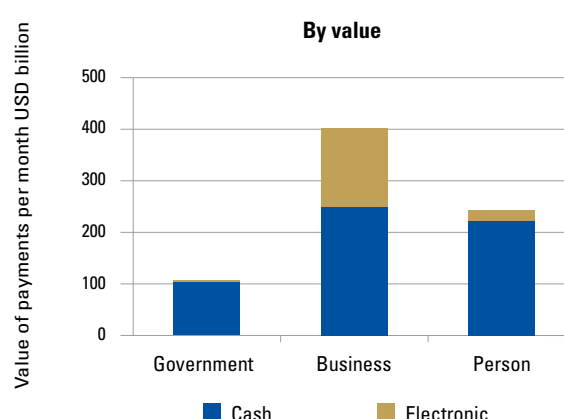
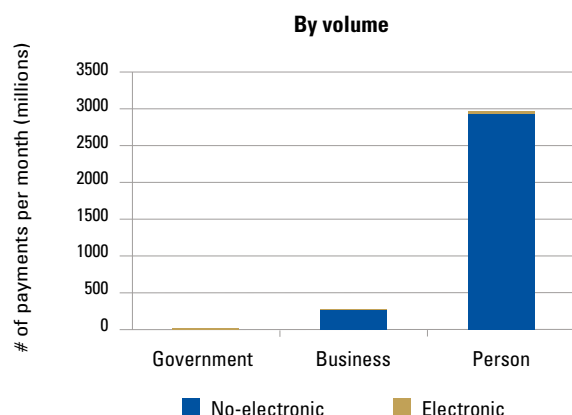
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Context Indicators

Population (World Bank, 2012)	168.8 million	Visa GEAR ranking (0-100)	24.0
GDP (current USD)	\$262.6 billion	Corruption Perceptions Index (Transparency International, 2012)	Rank: 139/174
World Bank income category	Lower Middle Income		
% adults with bank account (EFInA, 2012)	33%	Mobile penetration (ITU, 2012)	2003: 2.37% 2012: 67.7%

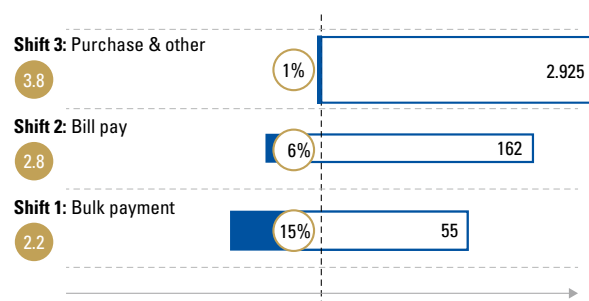
State of The transition to Digital Payments

Payments by payer per month



The majority of *government* payments by volume and value have already shifted to electronic; but large cash pools, valued at some US\$30 billion per month, mostly within the business and personal segments of the economy, remain.

Trajectories of the shift to electronic payments



The shift to a mainly electronic ('cash-lite') economy typically proceeds through three stages, which can happen concurrently but at different speeds. In Nigeria, the **first shift**, of one-to-many (bulk) payments, is well underway, thanks to a well-developed core national payments system. The **second shift**, one-to-many (remote bill) payments, is running up against conflicting incentives between bulk payees and financial institutions. The **third shift**, many-to-many, including purchases (P2B), has seen little progress because of a low level of financial inclusion and low adoption of existing electronic payment services.

Legend: 2.5 is the trajectory score for the use case connected to each shift; where 1=full shift very likely; 3=slow upward progress; 5=shift unlikely; see Annex B & C.

Note: 38% is % of total number, in millions, of monthly payments in each shift (shown at end of bar) which are electronic as in 2012; see Annex A.

Case studies

The diagnostic summarizes four potential case studies. The recommendation below is based on the wider portfolio of DRFRP case studies in various countries, which aims to address all Alliance stakeholders in their diversity in terms of outcome and the certainty of the in-country partner organization’s cooperation.

Corporate supply chains as catalysts for shift to electronic payments		
This collection of mini-cases would examine the costs and benefits to large companies of shifting certain payment types to electronic means, and the down-stream impact on the payment methods of companies’ suppliers and vendors. In addition to lessons for businesses, these mini-cases could inform governments concerning various policies intended to incentivize the private sector’s shift. Two of the identified companies recently received awards from the Central Bank of Nigeria for their efforts.		
BUS., GOV’T Audience	SUCCESS Outcome	VERY LIKELY Access to data

Measurement activities

Measurement activities were prioritized based on whether they address an Alliance focus area (such as gender, transparency, inclusion) if they fill a specific data gap, if they would support a case study, and the urgency of approving them to partner with other organizations.

Survey of traders on payments and barriers to shifting to electronic	Support for EFINA’s access to finance survey
This quantitative survey in select market areas would examine traders’ cost of cash and propensity to shift to electronic payments.	With Alliance insights and suggestions, EFINA could add payments-related questions to its upcoming national survey on financial inclusion.

INTRODUCTION TO THE BETTER THAN CASH ALLIANCE

The Better Than Cash Alliance is a partnership of governments, companies and international organizations that accelerates the transition from cash to digital payments in order to reduce poverty and drive inclusive growth. Shifting from cash to digital payments has the potential to improve the lives of low-income people, particularly women, while giving governments, companies and international organizations a more transparent, time- and cost-efficient, and often safer means of making and receiving payments.

We partner with governments, companies, and international organizations that are the key drivers behind the transition to make digital payments widely available by:

The Better Than Cash Alliance:

- a. **Advocating** for the transition from cash to digital payments in a way that advances financial inclusion and promotes responsible digital finance.
- b. **Conducting research** and **sharing the experiences** of our members to inform strategies for making the transition.
- c. **Catalyzing the development of inclusive digital payments ecosystems** in member countries to reduce costs, increase transparency, advance financial inclusion-- particularly for women-- and drive inclusive growth.

The Alliance's Development Results Focused Research Programme (DRFRP) accelerates the generation and dissemination of knowledge and tools for stakeholders transitioning part of their payments from cash to electronic. The DRFRP has three components: 1) Readiness diagnostics, which compile existing data on the volumes, values, and payment means for each kind of payment made by governments, the private sector, and development community partners, and assess the country's readiness to replace cash payments with electronic payments; 2) Case studies of on-going shifts; and 3) Toolkits to provide practical steps for Alliance stakeholders to plan, measure and implement shifts.

The DRFRP is managed on behalf of the Alliance by a consortium led by Bankable Frontier Associates, a Boston-based consulting firm, with advice from experts from the World Bank Payments Group and the CGAP Technology Team, as well as local research staff.

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1 Introduction

The Better Than Cash Alliance diagnostic approach

The Better Than Cash Alliance Country Diagnostic is intended to accomplish three things:

1. Measure the baseline state of the shift from cash to digital payments using the best available data;
2. Assess the trajectory of the shift in a way that can inform the country's decisions and priorities; and
3. Recommend case studies and measurement activities to support the development of toolkits for Alliance stakeholders.

These three objectives are achieved in the following ways:

- **Measurement:** The payment grid (shown in Figure 1 below) compiles data on the volumes and values of payments in the country, as well as the proportion of those payments made by electronic means, for payments made by government (G), business (B), individuals (P, for person), and the development community (D). The full grid and accompanying notes on sources and calculations are in an annex to the diagnostic. That annex also includes a description of the Data Quality Index, which rates the quality

FIGURE 1 The payment grid: Types of payments by payer and payee¹

PAYER	PAYEE		
	Government	Business	Person (Individual)
	G2G Budgetary allocations, Funding	G2B Grants, Payments for goods and services	G2P Welfare programs, Salaries, Pensions
	B2G Taxes, Fees for licenses	B2B Payments for goods and services	B2P Salaries and benefits
	P2G Taxes, Utilities	P2B Purchases	P2P Remittances, Gifts
Development community	D2G Taxes	D2B Payments for goods and services	D2P Cash transfers

(completeness and reliability) and availability of payments data in the country. The measurement section in the body of the diagnostic (Section IV) presents the headline findings on the remaining pools of cash in the economy.

- **Trajectory:** These sections provide a narrative of the evolution of policy on electronic payments (Section III) and the trajectory of the shift towards electronic means (Section V), through the lens of three particular use cases. A payment use case is an application of a certain type of payment instrument, using certain channels, to certain payment accounts. If the policy priorities, infrastructure and market incentives are aligned in regard to a given use case, then shifting to greater use of electronic payments should be easier to accomplish.

The Alliance whitepaper identified three shifts on the journey to 'cash lite' societies: a bulk payer shift, a shift towards electronic bill payment and finally, a shift for purchases. Figure 2 below shows

how a country might progress through these shifts; the shifts are not usually sequential, hence at a given time (such as the present depicted by a line), multiple shifts are likely to be underway simultaneously, although at different stages.

Two use cases are common across all the diagnostics: bulk EFT credits and remote bill payments. The first use case supports the shift between the first and second stages; the second use case supports the shift between the second and third stages. In each country a third use case is chosen for analysis that captures the story of the barriers to shifting the cash pools identified in the payment grid. In Nigeria, interviews with providers and users revealed major barriers to the adoption of card payments at merchants.

FIGURE 2 Shifts between stages from cash heavy to cash lite

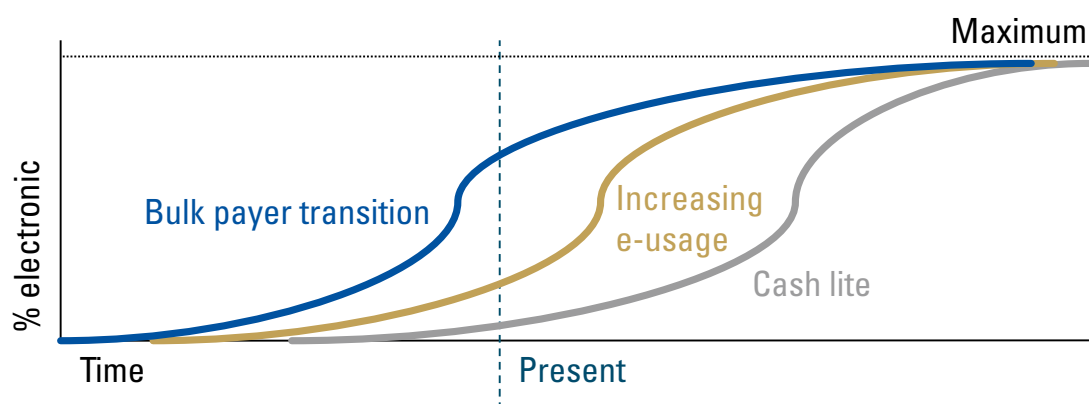


Figure 3 below shows the relationship between the payment grid and the use cases.

- Better Than Cash Alliance cases:** Finally, each diagnostic recommends three to five possible case studies of *actual shifts* implemented by the core Alliance stakeholder groups (governments, the private sector, the development community). Case studies document what happened, assess the costs and benefits, and draw lessons for the targeted Alliance constituency for the Alliance. The recommended cases (Section VII) are based on the potential learning experience for the Better Than Cash Alliance, the feasibility of conducting the

case study, and fit with use cases of particular importance for the given country.

Figure 4 maps the diagnostic report sections to the country journey: Section IV of this country diagnostic report locates the current status of country along this continuum, even though it cannot be measured with point precision, while Section V analyzes potential future trajectories based on underlying incentives to provide or adopt relevant payment instruments. Section III traces the evolution of the shift to electronic payments while the cases identified in Section VII highlight specific past attempts — successful or not — to shift.

FIGURE 3 Mapping use cases into the payment grid

		PAYEE		
		G	B	P
PAYER	G		1: Bulk electronic credit 2: Remote bill payment	1: Bulk electronic credit
	B	2: Remote bill payment	2: Remote bill payment	1: Bulk electronic credit
	P	2: Remote bill payment	2: Remote bill payment 3: Debit card payment at merchants	
	D		2: Remote bill payment	

Note: 1: Mass electronic credit (or mass bulk payments);
 2: Remote bill payment (or bulk payment collection);
 3: Debit card payments at merchant (retail card purchases).

Key findings: Nigeria

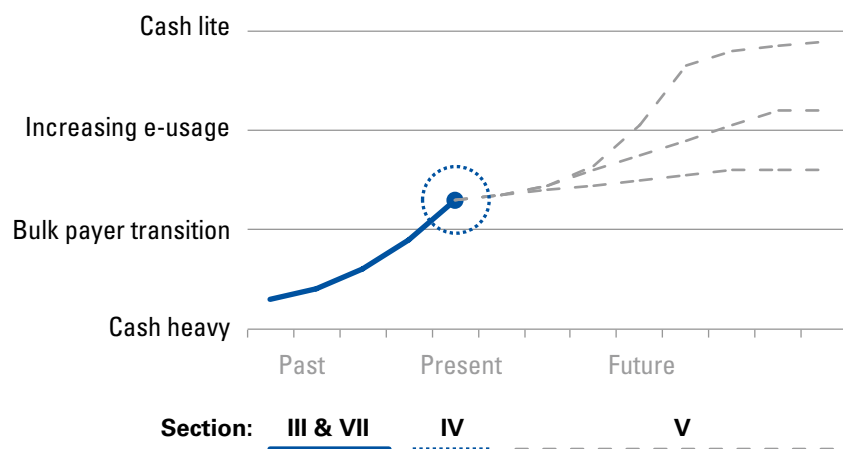
In common with other Lower Middle Income countries (LMICs), Nigeria still has a long way to go to reach the 'cash lite' marker where more than 50% of transactions are electronic. The overwhelming majority of transactions by number is still in cash, although the value of transactions is increasingly tipping towards electronic, reflecting more electronic usage by government and larger business. Although not growing sharply, other paper-based instruments remain common in business payments. However, the first shift (bulk payers) is well underway in Nigeria and has passed

the tipping point. The assessment of the trajectories for the subsequent shifts suggests that these will be harder to achieve, and will depend in no small part on how incentives align for providers and consumers for the roll out of mobile-based transactions, which have been very limited to date.

Unlike other LMICs, Nigeria has adopted very intentional policies to promote electronic payment usage. The Central Bank of Nigeria (CBN) has to date championed this process under its Payments System Vision 2020. This was recently updated (September 2013) and the CBN's commitment to an economy less dependent on cash reaffirmed. As banking regulator, the CBN primarily has influence over banks and other payment providers, but there are signs that other government agencies are actively supporting the move to digitize government payments. Nigeria is also unique among Alliance diagnostic countries so far in having explicit policies to disincentivize the use of cash through the cash-less policy (piloted in Lagos in 2012 and rolled out to a further six states in the Federation in 2013), which imposes service charges on individuals and businesses that withdraw or deposit cash over daily threshold amounts. The thresholds are high enough that they have little impact on most individuals but there is evidence that they are affecting business behavior towards payments from customers and to suppliers, which may ripple down corporate value chains.

Compared with other lower middle income countries, Nigeria also has a relatively well developed core retail

FIGURE 4 Relation of diagnostic sections to the journey to greater electronic payment



Note: Dotted line around marker for Section IV represents the Data Quality Index.

payments infrastructure, with a central switch (the Nigerian Inter-Bank Settlement System, or NIBSS) which supports a high degree of interoperability for standard payment transactions, including real-time payments from account to account – still rare worldwide. There are also several active private payment switches and a number of smaller private payment service providers which support an increasingly wide range of innovative payment solutions. However, while the policy intent is clear and the core payments infrastructure is in place, the incentives for providers and customers to expand the availability of use cases to support further shifts towards a ‘cash lite’ or ‘less cash’ (in Nigerian terms) economy for individuals is less clear at present.

Outline of this report

Section II describes the macroeconomic context for payments in Nigeria and the state of payments infrastructure. Section III presents a chronology of key policy initiatives – by the government and the private sector – which have to date propelled the shift from cash to electronic payments.

Section IV compiles existing data and calculations to quantify the number and values of payments made in each cell of the payment grid in the Nigeria, as well as the percentage of payments made by electronic means. Section V analyses the Nigerian payments system’s propensity to shift more payments to electronic, through the lens of three specific use cases: mass electronic credits, remote bill payment, and card payments at

merchants. Each of these use cases corresponds to one or more of the types of payments categorized in the payment grid.

Section VI draws on the Nigerian case to offer insights on the sequence of shifts from cash heavy to cash lite hypothesized in the Better Than Cash Alliance White Paper. The diagnostic concludes with a country plan for additional research under the Alliance umbrella during 2013 and early 2014, which will improve data quality related to the electronic transition: case studies of efforts to shift certain payment types to electronic and proposed additional measurement activities to better understand the barriers to shift. Note that this section is neither a plan nor a set of recommendations for Nigeria to follow since making any specific recommendations is outside the scope of a Better Than Cash Alliance country diagnostic.



2 Country context

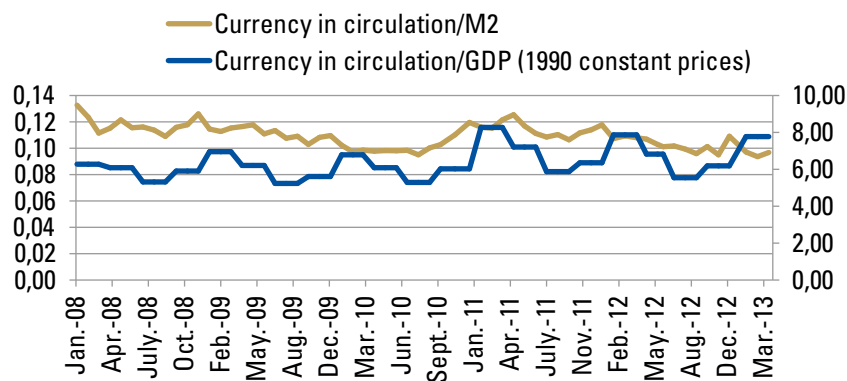
A divergent payments system

The shift toward electronic payments in Nigeria should be seen along two parallel tracks:

- In the core of the retail payments system, the government and the private sector have developed the core infrastructure of a national payments system with a relatively high capability to transact among financial institutions [banks and mobile money operators (MMOs)]; this electronic infrastructure is increasingly being used by governments, companies, and high-income individuals to make electronic payments using bank transfers and cards.
- However, the vast majority of adults and informal businesses do not have a formal financial account and hence are unable to accept or make electronic payments today. Outside of a few relatively urbanized states such as Lagos and Abuja (FCT), the availability of financial infrastructure and the extent of financial inclusion is low.

The net result, because of the much larger size of the second track, is that a national shift is not readily perceptible in macro aggregates. As Figure 5 below shows, in common with other countries at this stage of development, the overall stock of cash in the economy has not declined over the past five years, whether measured against the money supply or GDP.

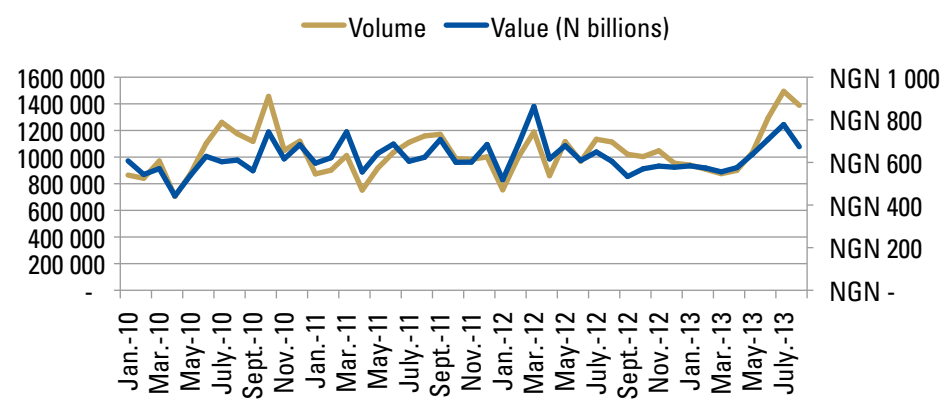
FIGURE 5 Money supply



Source: CBN data

Furthermore, check use is not yet declining either. As Figure 6 below shows, the value of checks written is approximately the same now as it was at the beginning of 2010 before value capping of checks was introduced by the CBN²; and the volume of checks is, if anything, slightly higher.

FIGURE 6 Checks processed through NIBSS



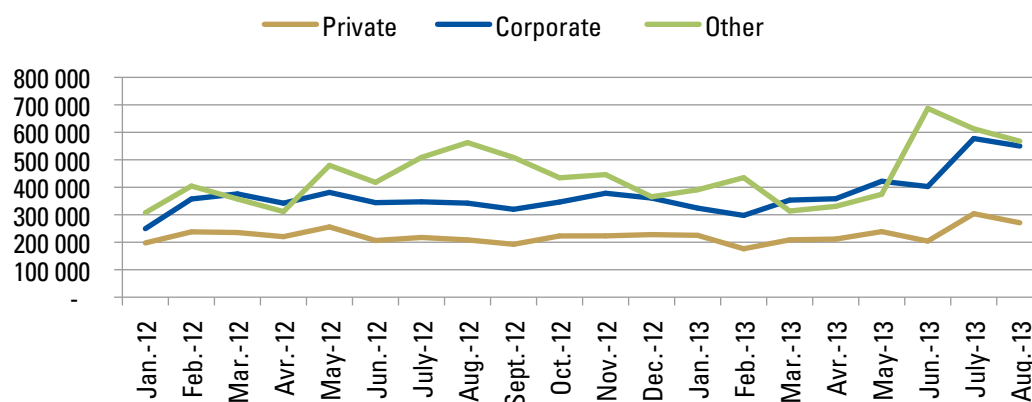
Source: NIBSS



However, it is worth examining the case of checks further. As Figure 7 below shows, individuals in Nigeria consistently write approximately 200,000 checks per month, but companies are writing on average

twice the number of checks as in 2012. (The increase in volume could be due to the limits on value.) The recent slight uptick in check use shown above is therefore due to a rise in check payments by companies.

FIGURE 7 Check volume by payer processed through NIBSS



Source: NIBSS

At the high end and in the formal sector, increasing access and usage to electronic payments

The increased overall usage of checks by companies may imply that they are holding back on making the electronic shift. However, it seems from the preliminary analysis in some of the proposed case studies of businesses in Nigeria that despite the lingering

reliance on checks, companies (and also high-end individuals) are increasingly supplementing and even replacing their check payments with electronic means. Two pieces of evidence support this conclusion: growing inter-bank transfers (see Box 1 below) and even purchases at point-of-sale (POS) devices, albeit from a low base.

BOX 1 Electronic instruments for inter-bank transfers in Nigeria

The Nigerian payments system offers several means of making electronic transfers, including NEFT and NIP, run by NIBSS, the Nigeria Inter-Bank Settlement System, owned and managed jointly by the commercial banks and the CBN.³

ACH Credits and Debits:

The high-volume batch payment method, NEFT [NIBSS Electronic Funds Transfer (NEFT)], is a typical ACH system that supports both credit and debit payments. NEFT transactions settle in two of the three daily settlement sessions of the national clearing system (NACS) operated by NIBSS. Settlement 1 (10:00 hrs.) and Settlement 2 (15:00 hrs.) offers same day value for ACH credits. There is no value limit (minimum or maximum) on NEFT payments ...

NIBSS Instant Payments (NIP):

A new payment scheme was introduced in 2011, offering real-time inter-bank account-to-account electronic funds transfers. The scheme, operated by NIBSS and offered by all major banks in Nigeria, has met with overwhelming approval from the user community as witnessed by the impressive adoption rate. NIP allows the payer to confirm the account holder name before sending funds. It uses the central switch to pass the payment instructions real-time to beneficiary bank which applies funds on receipt. Settlement occurs once per day in the NIBSS 3rd clearing cycle at 15:30 hrs.

As Figure 8 below shows, payment volumes through both NEFT and NIP are increasing relative to checks cleared.

And as Figure 9 shows, NIP volumes, from a low base, have grown at an average rate of 13% per month during the past year.

FIGURE 8 Payment volumes by instrument

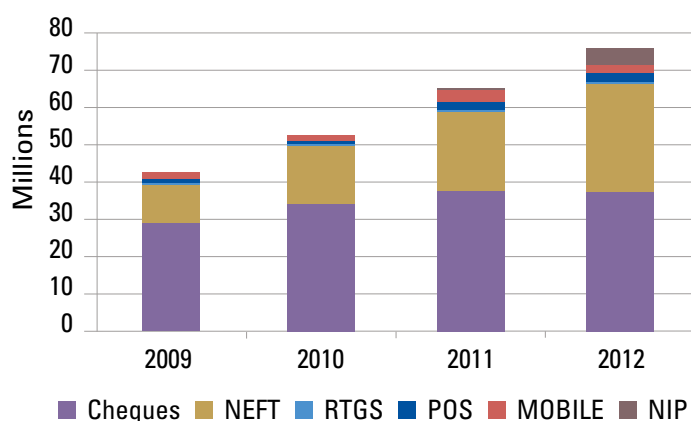
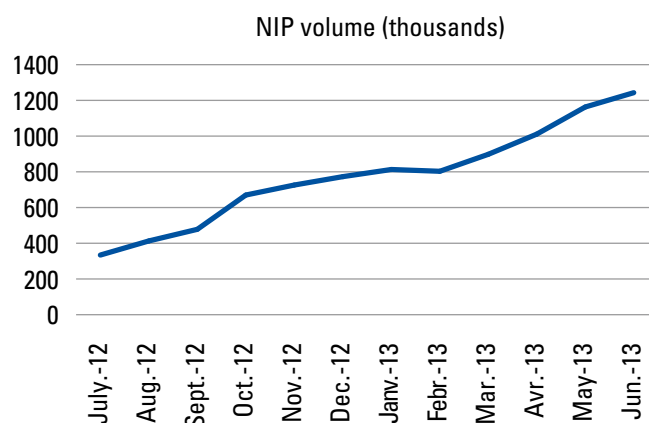


FIGURE 9 NIP volume



Source: CBN Vision 2020

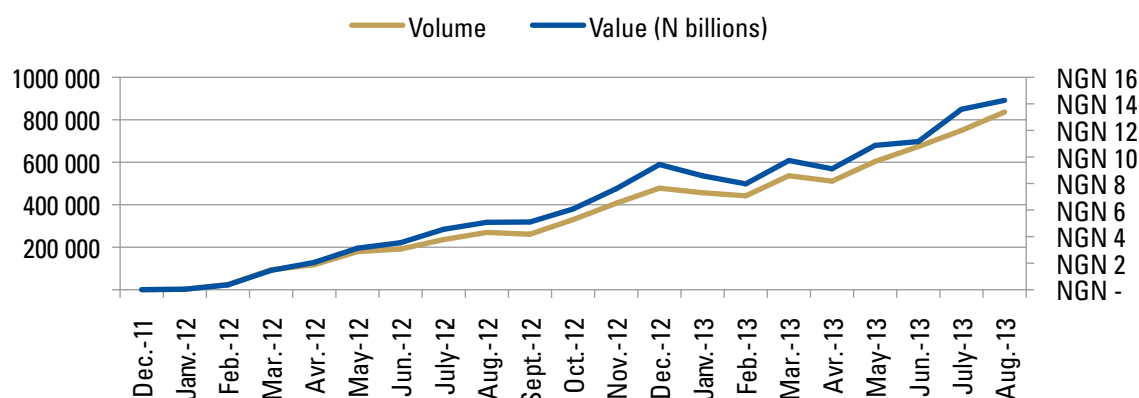
Note that the check, NEFT and NIP data represents only inter-bank transfers. On-us transfer data for each commercial bank is not available from the CBN.

Source: CBN Vision 2020

Card payments at POS, both credit and debit, are increasing, too, although from a low base. As Figure 10 below shows, NIBSS is now processing more POS purchase transactions, by volume and value.

Note that ATM deposits and withdrawals, though not counted as payments, represent 99.3% of all card transactions in 2012⁴ so that card use at POS is still relatively minor.

FIGURE 10 POS transactions processed through NIBSS

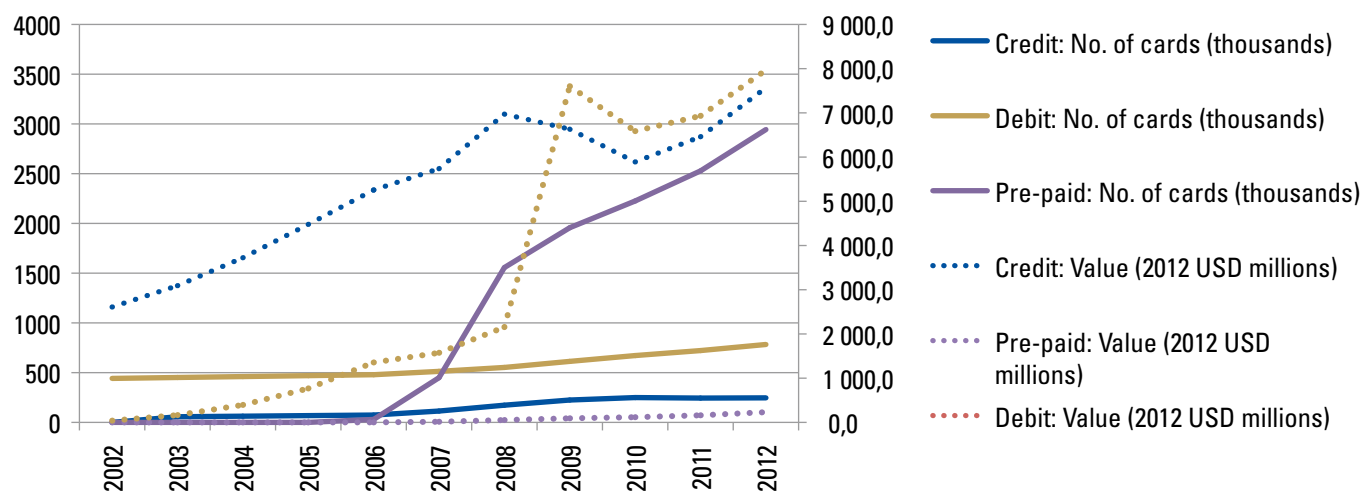


Source: NIBSS

Figure 11 below shows Euromonitor's estimates⁵ for cards in circulation and the value of payments for different

card types.⁶ There are far more debit cards in circulation than there are credit cards: According to the EFInA

FIGURE 11 Cards in circulation and card payments (modeled)



Source: Euromonitor modelling from trade sources/national statistics

Access to Financial Services in Nigeria (A2F) survey (2012), 21% of the population has debit cards (64% of the banked population); MasterCard estimated the number at 19% in 2011. Debit cards are also used to initiate

a much higher value of payments. The story of prepaid cards is the opposite: While issuance has jumped in recent years, transaction values remain low.

BOX 2 Government payments through GIFMIS⁷

In April 2012, Nigeria began using a Government Integrated Financial Management Information System (GIFMIS).⁸ This system allows the Office of the Accountant General, which oversees GIFMIS, to manage revenue into, and payments from, the Treasury Single Account (TSA).

Unlike in other countries where the development of a TSA required a separate and extended effort (see, for example, the Better Than Cash Alliance case study on Mexico G2P payments), the TSA is enshrined in the Nigerian constitution.⁹ The constitution specifies the conditions in which funds can be credited, debited and authorized for the purpose of making and receiving government payments, as prescribed by an order of the National Assembly. The account is maintained by the Central Bank of Nigeria and each ministry, department and agency (MDA) is responsible for their respective allocations, all of which are paid out of the TSA.¹⁰ According to policy, all federal government salaries and supplier payments are to be transferred directly into recipients' bank accounts through NIBSS's NEFT system. As of now, 209 of the approximately 650 federal ministries, departments and agencies (MDAs) have centralized their payments through GIFMIS, representing all of the MDAs in Abuja and 80% of the Federation's budget. The government pays banks a percentage of the value transferred. Until September 2013 the fee was 5 per thousand, but it has since been reduced to 1 per thousand.¹¹ Those remaining MDAs request funds from the OAGF, which then issues a block release from the TSA to the separate accounts the MDAs hold at commercial banks; the MDAs control the payment to final recipients, using the RTGS.

On the revenue side, management through GIFMIS began in September 2013. Individuals and businesses pay through designated banks, which then transfer the money electronically into the TSA, deducting a 0.1% fee at source,¹² regardless of whether the payment is made in cash or electronically.

Just as the high-end has begun to take advantage of the electronic payments infrastructure, so, too, has the federal government — as a large, formal employer and procurer — sought to shift to electronic

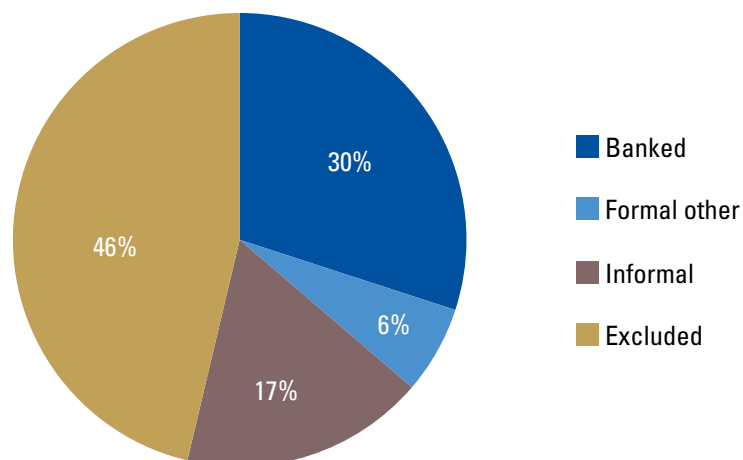
payments. (The government's role as a catalyst for the shift in the policy domain will be addressed in the next section.) This is illustrated by the development of the GIFMIS system (see Box 2).

For the majority, a persistent reliance on cash

The development of the core of the payments system stands in stark contrast to the majority of the population's lack of access to the formal financial system. On the consumer side, evidence comes from the A2F survey. As Figure 12 shows, just 33% of Nigerian adults have bank accounts as of 2012, up from 30% in 2010 and 21% in 2008. This figure is consistent with the 2011 Findex estimate of 30% with a formal account.

Formal inclusion is even lower in rural areas. Figure 13, using data from 2010, shows that nearly three-fourths of rural adults are fully excluded or use only informal financial services.

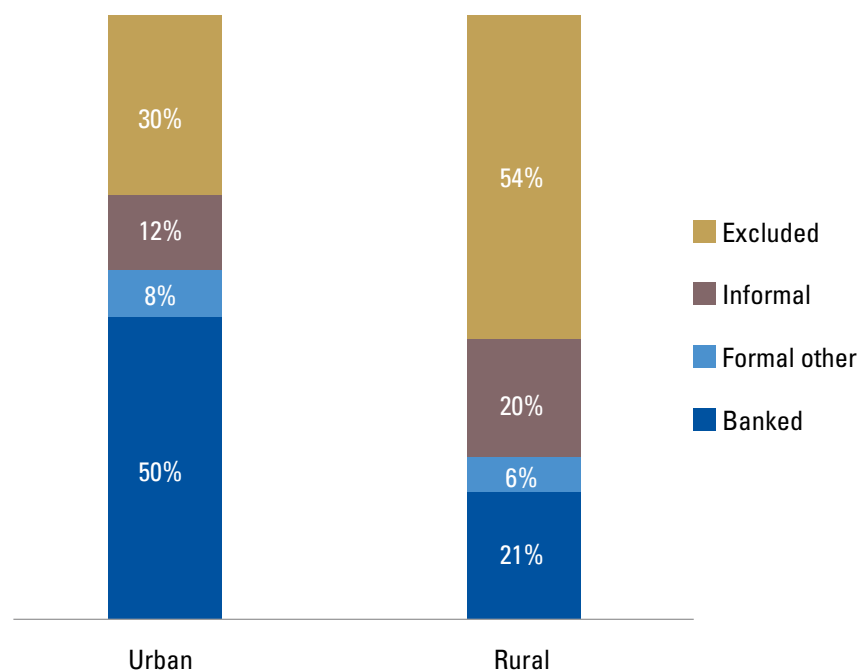
FIGURE 12 Financial inclusion in Nigeria¹³



Source: EFINA A2F 2012 Survey

Note: Percentages sum to more than 100% with rounding

FIGURE 13 Financial inclusion by urban/rural split



Source: EFINA A2F 2010 Survey¹⁴

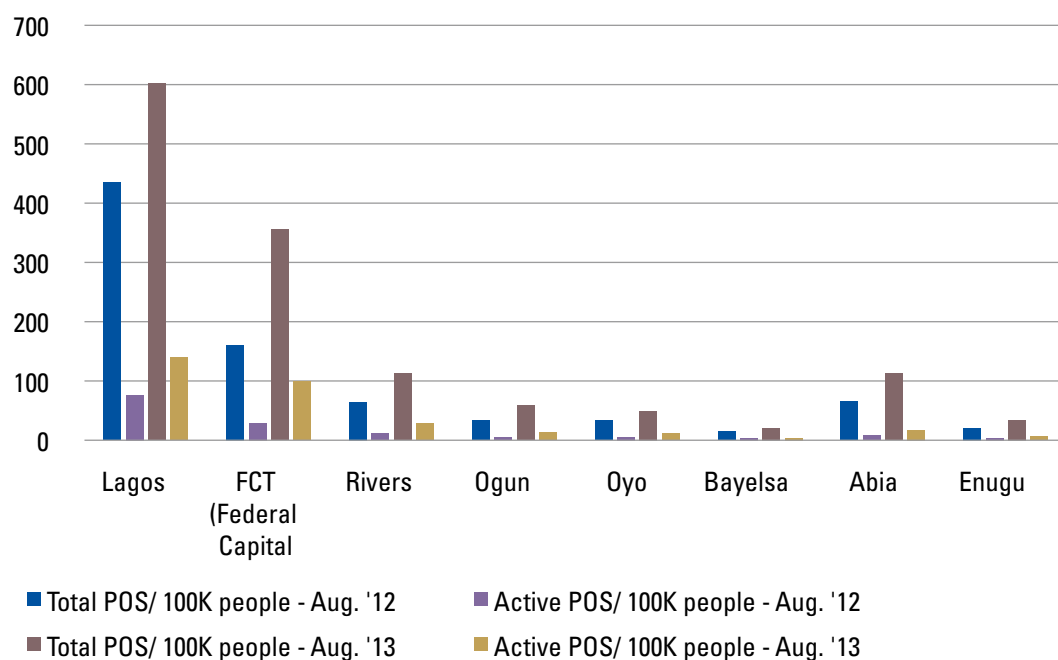
The supply-side data reinforces this picture. As Table 1 shows, branch and ATM penetration is low, as is the number of POS terminals (the CBN does not currently measure or report the number of unique merchants with POS devices, only the number of devices); and the few active mobile money agents are used primarily for low-volume bill payments and closed-loop distribution schemes.

Looking at POS devices specifically, Figure 14 below shows that POS devices are concentrated in the

most developed states, Lagos and FCT. This reinforces the picture that card-based electronic payments are still out of reach for the lower-end, rural population.¹⁹

As the next section describes, government policy, acknowledging the limited degree of inclusion, has increasingly sought to bridge the divide between the two tracks of the shift to electronic payments.

FIGURE 14 POS devices installed per 100,000 people by state



Source: NIBSS; National Bureau of Statistics population estimates

TABLE 1 Financial and mobile infrastructure

Cash Handling Points/100,000 people (2012) ¹⁵		LMIC 2011
Branches	6.8	8.6
ATMs	11.8	16.4
POS terminals	175	Na
Mobile payment agents ¹⁶	1.9	Na
Mobile-cellular telephone subscriptions per 100 inhabitants ¹⁷	68	
Percentage of Individuals using the Internet ¹⁸	33	

Source: LMIC; averages for lower middle income countries from World Development Indicators, 2011.





3 Evolution of policy toward electronic payments

Setting the stage for NPS development

The modernization of the Nigerian payments system has evolved over the past two decades, with the Central Bank of Nigeria as the driving force behind most policy and infrastructure developments. The process of modernization began as early as 1993, with the automation of the check clearing system²⁰ and the creation of a centralized settlement body.²¹ However, it was almost 10 years before these early interventions would gain traction and usher in the rapid development of the payments system infrastructure.

In its current state the retail payments system in Nigeria can be characterized by early adoption of electronic payment infrastructure but low penetration and usage of retail payment instruments. The former characteristic was the result of the need for greater transparency within the payments system, with high levels of leakage from large-value cash payment in business and government. The latter characteristic is the result of a combination of low outreach of service outlets and few products that are designed well enough to compete effectively with cash. Each characteristic has

had a significant impact on the evolution of policies for payments system development.

During the initial stages of the development of the electronic payment infrastructure (1996-2004) Nigeria experienced a significant amount of financial fraud,²² often exploiting weaknesses in the manual payment system as well as nascent electronic service platforms. The manual, cash-based system was acknowledged to be prone to exploitation because of the lack of transparency and increasing sophistication of financial crimes. The most recent developments in the payments system have been oriented towards the reduction of cash in circulation, not only to address fraud but to gain other related efficiencies, as well.

In 2011, the CBN estimated²³ that the direct cost of cash for banks and the CBN in 2009 was NGN114.5 billion (US\$725 million), of which two-thirds was for cash processing alone.²⁴ Furthermore, at the time of the analysis in 2011 it was estimated that the cost of cash would increase by 67% to NGN192 billion by 2012,²⁵ underscoring the case for banks at least to shift to less reliance on cash.

The discussion below will walk through the evolution of policies in Nigeria designed to introduce electronic payment services to the market and reduce the “burden” of cash on the economy. The overview will focus on the most significant policy interventions and related infrastructure investments that have had the most impact on the current state of electronic payments in Nigeria. The remainder of the report will pick up on many of these critical policy and infrastructure interventions to provide further details where relevant.

Early-stage investment in large-value payment infrastructure

The creation of the Nigerian Inter-Bank Settlement System (NIBSS) in 1994 set the stage for efficient clearing and settlement of interbank

payments via an automated system. This was the first stage of the development of an electronic banking system in Nigeria, with the specific vision of using NIBSS to eventually integrate a nationwide network of retail payment services.

After the establishment of NIBSS, the next major milestone in infrastructure was the launch of the Nigerian Automated Check Clearing System (NACS) in 2002, which in effect ended the manual clearing of checks. This had a clear impact on the efficiency of clearing time, reducing it from 12 days to two. However, an additional benefit of the NACS was the reduction of check fraud within the financial system, estimated to be over 50% of total fraud in the banking system in 2001.²⁶ This highlighted a key theme in the early stages of payment system modernization in Nigeria: reducing integrity risk.

FIGURE 15 Timeline of key developments

Major Policy Milestones	Major Infrastructure Milestones
	1993 Implementation of MICR
	1994 Establishment of NIBSS
Setting up of Technical Committee on Automation	1996
	2002 Full implementation and live operation of NACS; Reduction of the clearing cycle to T+3 and T+5
Guidelines on e-banking	2003
New Settlement Framework (for Cheque Clearing)	2004 Establishment of switching companies and ATM/POS interoperability
Cheque Standard & Cheque Printers Accreditation; Payments System Strategy Team	2006 Implementation of RTGS System, eFASS, and ERP; Establishment of National Central Switch
CBN Act oversees payment system; Payments System Vision 2020	2007
	2008 Harmonization of clearing cycles at T+2
Direct Debit Rules; Guidelines on Stored Value/Prepaid Cards; Mobile Payment Framework	2009
Guidelines on ATM Operations	2010 Cheque cap of N10 million; Migration to EMV Cards
Cashless Nigeria-Launch of Lagos Pilot; Guidelines on Point of Sale (POS) Card Acceptance	2011
Payment System Vision 2010-Release 2.0	2013

NACS was the first of many interventions that automated payments in a manner that improved efficiency via improved processing times and greater oversight of transaction flows.

Following the NACS implementation the CBN introduced a series of policies to promote electronic payments, most critically the electronic banking guidelines²⁷ (2003) and an updated settlement framework for check clearing (2004). The electronic payment guidelines were the first to provide clarity on the use of Information and Communication Technology (ICT) including Internet banking, point-of-sale (POS) devices, Automated Teller Machines (ATMs) and even mobile phones. These are discussed further in the following section.

By 2005 a National Payment System Committee was established to guide developments and facilitate formal dialogue with the industry, in response to the increasing complexity of the payment system in Nigeria. The Committee is chaired by the Governor of the CBN and attended by representatives from the Bankers Committee, the Accountant General of the Federation, the Federal Inland Revenue Service, Nigeria Customs, and the CBN Director of Banking Operations. This interface between key public and private stakeholders provided a forum for discussion of industry standards, encouraged appropriate risk management and efficiencies, and ultimately provided a context for the views of participants to be heard.

The main outcome of the early stages of the CBN's role in payments system oversight was harmonization of the clearing system. By 2008 clearing cycles in Nigeria were reduced to three working days (T+2), increasing efficiencies for participants in the retail and wholesale payment networks.

No NPS Act yet

In 2013, there is no overarching law or single legal framework governing payment systems in Nigeria, although CBN has prepared a draft Payment System Management Bill. In 2007, however, the Central Bank of Nigeria was given authority through its general governing act²⁹ to oversee and regulate the payment system.²⁸ Under this authority the CBN has issued several regulatory frameworks that have had a significant impact on the development of the payments system, particularly retail payments. Prior to this, payment system development was largely managed by a Technical Committee on Automation comprised of government and private sector stakeholders with no clear oversight framework in place.

Between 2003 and 2011 there were six major regulatory frameworks issued to the market explicitly designed to address an increase in electronic payments. These frameworks were driven by a national focus on greater efficiency and integrity in payments, as well as the desire to ensure Nigeria operates within international standards.

The **first policy guidance** to be issued during this period was the Guidelines on Electronic Banking

(2003) which set the tone of future regulatory guidance by setting out specific standards for technology and product development through the use of electronic channels, namely payment cards and the Internet. Following closely on the heels of the Guidelines on Electronic Banking was the Settlement Framework for Check Clearing,³⁰ issued in 2004. These rules were still oriented toward retail payments, but were more focused on an appropriate infrastructure that could facilitate efficient transactional clearing for checks, which were the dominant non-cash payment instrument at that time.

In 2005 a National Payment System Committee was established to further coordination of policy and infrastructure developments. Several significant system developments came to fruition in 2006, shortly after the NPS Committee was established. These developments were (i) the implementation of the Real Time Gross Settlement (RTGS) System, (ii) the establishment of a National Central Switch, (iii) check printing standards and accreditation, and (iv) an Enterprise Resource Planning (ERP) system to enable electronic payroll.

The RTGS in particular signified a transition between the wholesale and retail focus in payment system development. The RTGS is designed for high-value payments (as is needed for wholesale transactions) but also offers the services to individual customers, who until 2005 were unable to send large values between bank accounts in real time.

The **next milestone** in policy guidance came in the form of a **national payments system development strategy** to shape policies to the year 2020. The first Payment System Vision 2020 (PSV2020)³¹ was based on an assessment of international best practice defined by the Bank for International Settlements³² and formally launched in 2007. Its objective was to make the Nigeria payment systems “Internationally Recognized, Nationally Utilized.” The PSV2020 identified seven specific initiatives to promote adoption and seven infrastructure recommendations to improve the robustness of the system. Most of these are linked to first (G2P,B2P) and second shifts (B2G,P2G, P2B) on the journey to cash lite. These are highlighted in the table below.

TABLE 2 Payments System Vision 2020 initiatives

Usage Initiatives	Infrastructure Initiatives
Government Supplier Payments	Adopt BIS Core Principles
Securities Settlement	Reduce Settlement Risk
Person-to-Person Trade	Expand Payment Methods
Salary Payments	Improve Consumer Protection
Bill Payments	Enhance Infrastructure
Business Taxes	Clarify Legal Framework
Individual Taxes	Fine Tune Governance Model

This emphasis is also reflected in several regulations that were issued after the release of the strategy. In 2009 two separate guidelines were introduced for **mobile-based payments** and usage of **stored value and pre-paid cards**. These guidelines addressed the realization that there were few options for Nigerians to make small value payments electronically. Both frameworks provided guidance on issues that had previously been unaddressed in the Nigerian payments market. Of particular note, the mobile payments framework provided clarity on the role mobile network operators could play in the development of the payments system, as well as clarity on use of agent networks for service distribution. Similarly, prior to 2009, there was no regulatory position on the usage of stored value or pre-paid cards and criteria for issuers. Following the issuance of these guidelines the CBN issued additional guidance on the use of ATM operations in 2010³³ and the use of Point of Sale (POS) Card Acceptance Services in 2011.³⁴

Separately but also importantly, the CBN defined the standard for the 10 digit Nigeria Uniform Bank Account Number (NUBAN) in 2010 and associated bank routing codes, simplifying the automatic routing of EFT transactions. Preliminary interviews for the proposed case studies suggest that these changes reduced the failure rate of EFTs and built trust in electronic payments among companies.

Cash-less Nigeria: Defining the future of electronic payments

To further frame the ultimate purpose of the previously described regulations, the CBN launched in 2011 a national “Cash-less Nigeria” project. This started with a pilot in Lagos state in 2012 and was rolled out to a further six chosen states in 2013, with the intent of going nationwide in 2014. The Cash-less initiative is designed to promote payments system efficiency by directly addressing the inefficiencies associated with the pervasive use of cash in Nigeria. The policy introduces a disincentive structure of service charges³⁵ to encourage individuals and businesses in Nigeria to use cash less (hence the name Cash-less, which does not in fact mean that objective is no cash at all). These charges include, for example, penalties on the deposit of large amounts of cash and limits on cash withdrawals (see Box 3 below for details). The Cash-less policy takes pains to note that the goal is not to eliminate cash entirely but rather to move towards a more cash-lite context, where citizens have the freedom to choose viable³⁶ electronic alternatives to cash.

The CBN’s stewardship of the Cash-less Nigeria policy, in particular, has raised awareness in the market of the government’s intention to encourage displacement of cash payments by electronic alternatives. The initiative is by far the most public-facing payments-related policy in Nigeria, effectively operating as the culmination of 20 years of payment system development. However, a review in late 2012 showed that,

BOX 3 Cash-less Nigeria

The CBN adopted the following initiatives to reduce the cash intensity in the economy, encourage electronic payments and enhance the Nigerian Payments System:

- Fixed a daily cumulative limit of N500,000 and N3,000,000 on free cash withdrawals and lodgements by individual and corporate customers of banks respectively, effective April 1, 2012, in Lagos.
- Individuals who make cash transactions above the aforementioned limits shall be charged a service fee of 2% and 3% on deposits and withdrawals respectively while the service charge for companies is 3% and 5% on deposits and withdrawals respectively.
- Disallowed encashment of third-party checks above N150,000 over the counter. Value for such checks shall be received through the clearing house.
- Directed that Cash-in-transit lodgements services rendered to merchant-customers by banks shall cease. However, customers could engage the services of CBN licensed CIT companies to aid cash movement to and from their banks at mutually agreed terms and conditions.
- Stipulated that card schemes, foreign or local, shall not operate exclusive acquirer agreements or contracts in Nigeria, effective June 1, 2011. This is expected to facilitate interoperability of local currency POS transactions and increase its operational efficiency.
- Continued with the implementation of massive deployment of shared POS terminals under the shared service project, with a view to reducing the cost of its operation.

The policy was piloted in Lagos but rolled out in 2013 to six other states. The policy was introduced in July and the service fees became effective in October.

other than increasing awareness for the policy itself, the policy's components had as yet limited effect on patterns of individual usage or on the drive for financial inclusion.³⁷ Eighteen months after the Cash-less rollout started in Lagos, the market in Lagos is still faced with low usage of electronic services, especially POS transactions, a symptom of too little access to electronic distribution points and, where there is access, misaligned incentives for all participants. However, the review suggested that the effect of the Cash-less policy may be felt most by businesses. And preliminary interviews with the proposed case study subjects suggest

that this is the case: Companies have welcomed the policy and made shifts in their approach. The proposed case studies would follow up with more detailed analysis of the effects of the policy on companies.

Updated strategy focuses on enabling usage of electronic services

In September 2013, the CBN launched an update of its PSV2020. Referred to as "Release 2.0" of the Payment System Vision 2020, the updated strategy intends to build on existing achievements in the legal environment and infrastructure. In particular the updated strategy notes that the

international standards for payment system development have also evolved since 2007 and as such, Nigeria must ensure the various policy objectives and infrastructure investments remain in line with global standards. For example, Release 2.0 is specifically measured against the BIS IOSCO Principles for Financial Market Infrastructure and has framed the respective recommendations to ensure any deficiencies in the current national payments system are addressed.

The updated strategy also takes a more holistic vision of the retail payment system and identifies eight specific industries or sectors in which electronic payments will be prioritized. Each industry will have a dedicated working group comprising of public and private sector stakeholders, with an initial tenure of 24 months to address the most pressing issues. The industries identified are:

1. Agriculture	2. Transport
3. Smart Cities	4. Education
5. Government Flows	6. Health
7. Hotels and Entertainment	8. Bill Payment and Direct Debits

BOX 4 Focus on agriculture — an example

The PSV2020: 2.0 provides a specific example of how the focus on industries (each referred to as a “vertical”) will take shape. Below is a summary of the Agriculture Vertical that highlights the rationale and initial strategic workplan for the industry, extracted from the updated strategy.³⁸

Rational for promoting adoption in the Agriculture sector:

- Represents 43% of GDP and engages 70% of labor force
- High potential for employment generation, food security, poverty
- reduction and industrialization
- Existing Federal/ State Government focus
- Largest constituency for financial inclusion, with service opportunity for KYC Identity enrolment, basic transaction account, mobile wallet, and pre-paid cards
- Fit into the agenda to de-risk agricultural financing and facilitate low-interest credit
- Facilitate efficient and transparent government grants and subsidies

Current plan agreed with public and private stakeholders includes:

- Integrate the relevant activity plans for multiple stakeholder communities³⁹
- Plan to use the over 10 million farmer data to simultaneously provide Unique
- Identification, a “No frills” Savings Account, a Mobile Money Account and Prepaid Card
- Empower development institutions and agent networks to ease and broaden access to payment services by Agriculture communities
- Work with communication experts to clearly define key stakeholder roles

The updated PSV 2020 commits to entrenching electronic payments throughout these value chains, and is intended to be the keystone for the further development of the payments system in Nigeria. The update has the benefit of hindsight to focus more tightly on key priorities (i.e., industry verticals) while simultaneously ensuring progress is in line with international standards. Given recent investment in key infrastructure, the focus of Release 2.0 is on adoption and distribution of electronic payment services. The current low usage levels can be attributed to many barriers (such as access, literacy, technology, geography, etc.). However, it is clear that the private sector must have an environment that truly enables new models to emerge and address the barriers. The success of the PSV 2020 2.0 will likely require greater harmonization across the numerous regulations and guidelines on electronic payment services to ensure that all players (public or private, new or old) are not ensnared in legal complexities associated with regulatory guidance originating from multiple points of origin (for example, use of cards at ATM or POS devices are noted in at least three different regulations).⁴⁰ The proposed introduction of the draft Payment Systems Management Bill is an opportunity to address the issue of policy and regulatory harmonization and as such provide a stronger foundation from which the vision for 2020 can be achieved.

National IDs and linked debit cards

As one further recent significant development, in May 2013,⁴¹ the National Identity Management Commission (NIMC) and MasterCard Worldwide announced a deal to roll out national ID chip cards with built-in bank pre-paid debit card functionality. The new ID card process is designed to function as follows:

1. A Nigerian goes to NIMC and is issued a national ID number and an ID card. That card, paid for by NIMC, has a chip that can store biometric information (such as photo and fingerprint) as well as payments information using MasterCard technology on separate, firewalled parts.⁴² The enrollment process is managed entirely by NIMC.
2. The ID cardholder can use the card, which has his or her unique ID number on the front and a MasterCard logo on the back, as a unique means of identity in Nigeria.
3. If he or she likes, the cardholder can also add cash to the card or withdraw cash from the card on all MasterCard acquiring ATMs globally, or, in the future, also from agents.

The program is due to be piloted beginning in December 2013. During the pilot, 13 million cards will be issued, though not necessarily all at the beginning of the pilot. Each cardholder will be assigned to one of the seven to 12 banks participating in the pilot, but that assignment has not occurred yet,

nor has the process been fully decided. Banks' logos will not be on the card. The issuing bank will pay processing fees to MasterCard; the card will use the regular interchange fee structure for off-us ATM usage.

This type of payment instrument can be very useful for enabling one-to-many payments such as G2P or donor-to-person payments to presently unbanked people. But in the absence of large-scheme flows

like these, the business case for participating banks is not yet clear, since balances on the card and transaction levels will likely be low at first, unless a third-party payer has the incentives to pay enough for transactions to credit the card. It is too early yet to assess the likely takeup and usage on the payment component of the cards; although the existence of a secure national ID will likely be valuable in itself.





4 Current state of transition to electronic payments

Headline indicators

The narrative in the previous two sections comes from a thorough analysis of available data on payments made in Nigeria. This data indicates that the majority of the payments made in Nigeria are made in cash: 1.56% of the 3.14 billion payments that are made every month are through electronic means.

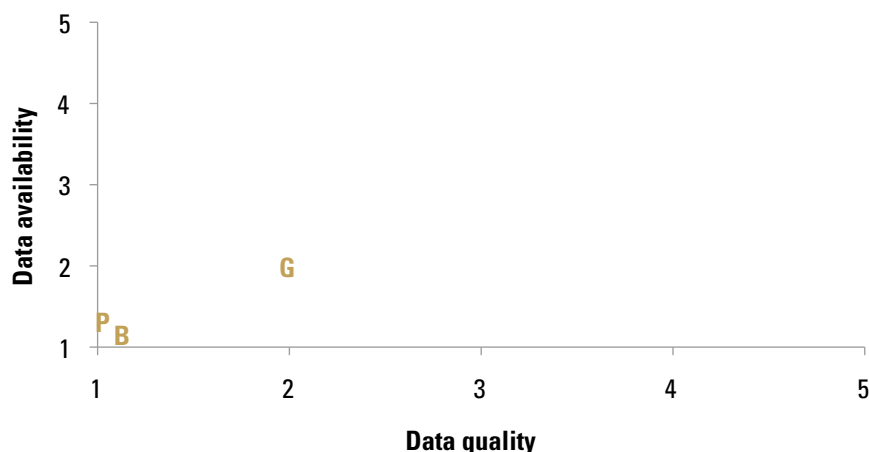
The dominance of cash in the country's payment system is not surprising considering the large unbanked population and the predominance of the informal sector, whose customers and owners transact almost exclusively in cash.

Data Quality Index

Quantitatively mapping the payments landscape is a necessary first step to a targeted effort to convert cash to electronic payments. However, with large segments of transactions taking place in cash, aggregate estimates – especially data on payment volumes – are not generally available and need to be constructed from multiple sources. Figure 16 below provides an at-a-glance indication of the quality and availability of the data relating to

each payer of the grid, based on the scoring below, and hence the country team's confidence in the overall calculations. In general, in common with many emerging markets, the quality and availability of data relating to government payments (G) is much better than for business (B) or individuals (P) where it is generally lacking and relies on extrapolation based on assumptions from a variety of estimates.

Government payments received scores of 2 for both data quality and availability in terms of the scale. While data from select government institutions was reliable and readily available, other key government data points were gleaned using information from public news articles and required multiple assumptions. Business and consumer payments received scores of 1 of quality and availability. While the Nigeria diagnostic team was able to estimate values for these two payer types using national surveys, estimates for volumes were made using international heuristics, such as international financial diaries data, and pre-existing studies, such as data from MasterCard Advisors. DRFRP measurement activities proposed in Section VII will seek to contribute to improving these scores.

FIGURE 16 Data quality and availability for Nigeria

Payments data by payer and payee

As Table 3 below shows, government entities, businesses, and individuals in Nigeria make an estimated 3.14 billion payments per month, nearly 37.7 billion payments per year. This corresponds to a value of US\$59.1 billion per month or US\$708.9 billion per year. Individuals and businesses initiate the vast majority of payment volumes (99.8%) and are overwhelmingly cash-heavy: only 1% electronic for individuals and 4% electronic for businesses.

The total value covered by this data is much greater than Nigeria's US\$262.6 billion⁴⁴ GDP because this analysis follows payment streams through multiple transactions.

The data suggests there is a non-electronic cash pool of US\$58.1 billion in monthly payments. Person-to-business payments represent the second largest pool of cash value for electronic conversion at an estimated US\$13.2 billion. The largest pool by value is business-to-business payments, mostly in the

TABLE 3 Payments by payer in Nigeria⁴³

Payer	No. of payments per month	% volume electronic	Total value NGN million	Total value US\$ million
Government	4,177,393	62%	1,470,182	\$9,458.34
Business	191,149,103	4%	5,388,952	\$34,669.53
Individuals	2,946,870,772	1%	2,322,949	\$14,944.57
Total per month	3,142,197,268	1.6%	9,182,083	\$59,072.43
Total per year	37,706,367,216	1.6%	110,184,991	\$708,869.16

form of supplier and salary payments, estimated at US\$28.1 billion.

Table 4 below shows the volume of monthly payments for each payer-payee combination. In Nigeria,

as elsewhere, most payment transactions occur between individuals and businesses, and between businesses and other business or corporate establishments.

TABLE 4 Number of monthly payments by payer and payee type

		PAYEE		
		Government	Business	Individuals
PAYER	Government	1,640	319	4,175,434
	Business	180,305	142,286,914	48,681,884
	Individuals	380,155	2,877,550,617	68,940,000

Payments from individuals-to-businesses (P2B) account for the largest volume of payments. Businesses also make more than 142 million monthly payments to suppliers (B2B), and 48.7 million salary payments (B2P) each month. In the government space, salaries, pensions, and social transfers represent the largest share of payment volumes. Data on donor payments was not readily available, but interviews in-country with several donors suggest those payments are marginal in the Nigerian context.

Tables 5 shows that for payment volumes, government payments are the most electronic in percentage terms, followed by business and then individual payments. Government

payments – especially government-to-government (G2G) and government-to-business (G2B) payments – are largely paid through bank transfers and other electronic instruments.

The low prevalence of electronic payments in P2B, P2B, B2G transactions is driven by persistent informality in the Nigerian economy. Results from the NBS-SMEDAN survey suggest that the overwhelming majority of those employed in Nigeria work in micro enterprises, of which almost all are unregistered and therefore informal. These businesses, by definition, do not employ more than nine employees and most employ only one or two. Employees are invariably paid in cash.

TABLE 5 Percentage of electronic payments by volume⁴⁵

PAYER	PAYEE			
		Government	Business	Individuals
	Government	100%	100%	62%
	Business	100%	2%	9%
	Individuals	100%	1%	5%

Comparison to other sources

The estimates above compare with other recent work as follows:

- Volumes: Gates Foundation (2013): This diagnostic's estimate for the overall number of payments per month, at 3.14 billion, is close to the Gates estimate of approximately 3.3 billion (2013).⁴⁶ However, the overall percentage of electronic transactions at 1.56% is higher than the 0.2% estimate. Though Gates's estimates do not categorize payments by payer-payee combination type, the difference is likely due to the P2B and B2B payment cells. The diagnostic team was unable to obtain reliable information in-country on the degree of cash usage in consumer and B2B payments; therefore, the percentage of consumer payments by volume made electronically was estimated using a confidential source and the estimates for B2B were benchmarked using data from other Better Than Cash Alliance diagnostic countries. The estimate for P2P domestic remittances at 4% electronic is based on a 2012 Gallup study and brings up the overall percentage electronic figure for the consumer category.
- Values: However, the estimate of the proportion of electronic payments by value overall (at 46%) ends up very close to Gates's 49% estimate.
- MasterCard Advisors' Cashless Journey for Nigeria⁴⁷ (2013) focuses only on the consumer payment portion of the payment grid, where it estimates 10% of transactions by value were cashless in 2011. The diagnostic estimates that all consumer payments (including P2G and P2P) are 5% by value.

5 Trajectory of shift: infrastructure and incentives

Relevant use cases

Better Than Cash Alliance country diagnostics seek to assess the trajectory of the shift to electronic payment, through the lens of particular payment use cases (see Annex C for more information) which are particularly relevant to the stage of the journey of the country. This section explains the current state and momentum of the shift to electronic payments in certain cells of the payment grid.

The use cases selected for analysis provide a general view of the forces driving the shift in Nigeria today:

- A. Mass electronic credit (or mass bulk payments)
- B. Remote bill payment (or payment collection)
- C. Debit card payments at merchant (retail card purchases)

These use cases (color coded as per the footnote) apply to the

FIGURE 17 Use cases and payment types in Nigeria

		Recipient		
		G	B	P
Entity making the Payment	G	G2G Central government disbursements to local level	G2B Supplier payments Utility payments	G2P Welfare programs, Salaries, Pensions
	B	B2G Taxes, Fees for licenses and permits	B2B Supplier payments, Utility payments, Pension contributions, Social security contributions	B2P Salaries and benefits
	P	P2G Taxes, Utilities Debit card payment of taxes	P2B Utilities, School fees, Credit card payments, Pension contributions, Social security contributions, Debit card payment at stores	P2P Remittances, Gifts
	D	D2G Taxes	D2B Utility payments	D2P Cash transfers

Note: Mass electronic credit (or mass bulk payments); Remote bill payment (or bulk payment collection); Debit card payments at merchant (retail card purchases)
G = Government; B = Business; P = Individuals; D = Development partners

different cells of the payment grid as highlighted in Figure 17 below. The payments are made and received by: government (G), business (B), individuals (P - for person) and the development community (D).

Table 6 below presents a high-level review of the availability and costs of electronic payments for each of the three use cases.

The remainder of this section is a rating of the trajectory towards shifting for these use cases. In each

case, several factors are assessed: the overall country environment and conditions to promote shift; the interest of service providers; and incentives from different user groups. The detailed ratings can be found in Annex D.

TABLE 6 Overview of Payments Use Cases⁴⁸

Use case defined	Bulk payers (G, B, D)	Non-bulk payers (P, B)	
	A. Mass electronic credit – Mass fund transfers	B. Remote bill payment	C. Debit card payment at merchants
(a) Store of value from/to which payment is made	From and to any regulated electronic account	From any regulated electronic account to any biller	From any regulated electronic account with debit card to any merchant's account
(b) Payment instrument category	EFT Credit transfer	EFT Credit transfer	Debit card payment
(b1) Transaction type	Batch transfer and/or real-time clearing (small volumes)	Bill pay (real-time and/or batch) credit transfer to biller's account	Cleared in real time against payer's account balance, settled overnight
(c) Channel used to initiate and authorize	Internet banking Secure File transfer	ATM, mobile, Internet, POS	Card POS Card Internet
Is there a range of providers who offer this?	Yes	Yes, both financial institutions and non-financial providers	Yes
Time to credit value received	Next day / immediate	Real-time and T+1	Overnight
% of all accounts which can use this instrument from any bank	100%	100%	% of accounts with debit cards ~ 96%
Indicative cost range per average tx size	Unknown ⁴⁸	Users pay a fee (US\$0.63/ NGN100). Biller pays	1.25% Merchant service charge mandated by CBN
As % of average tx amount	0.003 % for G (Av. US\$2,400/ NGN381,000) 0.04% for B (Av. transaction in ACH US\$2,150/ NGN341,355)	2.5 – 5.5% Average utility bill payment of US\$15/ NGN2380	Average purchase with debit card US\$30 / NGN4760

The factors that generate the ratings vary somewhat by the use case, but each is rated according to the categories in Table 7 below.

TABLE 7 Use case ratings

1	Highly likely to support a full shift
2	Possible to achieve a full shift
3	Likely to lead to slow incremental progress
4	Likely to drift without clear upward trend
5	Unlikely to lead to shift

Use case A: Mass electronic credits

Use ase assessment:

2.2

Possible to achieve shift

This use case refers to the disbursement of funds from one entity to multiple individuals or firms

through a single payment transaction (one-to-many) and it exemplifies the main mechanism of payments behind Shift 1. The most common examples of this use case are shown in Table 8 below.

In percentage terms, G2G and G2B are the most electronic of these categories: G2G payments are 100% electronic by value and volume through the first disbursement to the state or local level; data on payments made by state and local governments is not centrally available.

Government procurement is managed through GIFMIS (see Box 2).

This has largely eliminated checks from procurement payments. National security agencies are exempt from the centralization requirement. They may be making many of their payments electronically but this data is not available centrally.

As per the 2004 Pension Reform Act, government entities and companies of five or more employees are required to participate in the contributory

TABLE 8 Use case A payment streams

Mass electronic credits	Exists currently	% electronic by volume
Salary payments (G2P, B2P)	Yes	61% for government; 9% for private sector (formal & informal)
Conditional Cash Transfers, other government / social programs or subsidies (G2P)	CCTs not significant but other transfers (e.g., amnesty payments) exist	61%
Supplier payments (B2P, G2B)	Yes	100% for federal government; 2% for business
Payment of pensions (B2P)	Yes: Government and private pensions paid through designated pension funds	100%
Disbursement of fiscal resources from federation to federal, state-level and municipal governments; and from federal to state level (G2G)	Yes: Includes oil revenues disbursed to three levels of government, and emergency transfers from federal government	100%

pension scheme managed by private pension funds (for both public and private sector retirees); this took the place of a range of defined benefit schemes. All pension payments have been made electronically since 2007; today only pre-2007 legacy retirees are paid by check.

Using data from a survey of businesses conducted by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and the National Bureau of Statistics (NBS), it is estimated that large businesses pay 61% of salaries electronically; medium-sized business, 31%; and small businesses, 15%.⁴⁹

Approximately 52% of the NGN 204,820 million in monthly salary and wage payments (for government and private sector employees combined) are made electronically into a bank account. Nigerians employed in the informal sector are likely paid in cash.

Because of the large values involved, and the potential to bring employees into the digital economy, B2P salary payments represent the biggest opportunity for a shift in bulk payments. This is already happening for large, formal businesses; but for smaller ones, even those with bank accounts, payments are not being made electronically.

The analysis of this use case shows that:

- Regulatory and market conditions fully support the shift of bulk payments from both the private and public sector to electronic form.
- The federal government has already driven a massive shift

to electronic in government-originated bulk payments.

- The advantages of making bulk payments to employees and providers are clear. Competition from existing Code Line Clearing⁵⁰ (CLC) of checks for salary payments is decreasing.
- All the major banks are connected to NIBSS Electronic Fund Transfer (NEFT) which is used for not-on-us salary payments.
- The infrastructural barrier to further shift is the lack of infrastructure for recipients of electronic payments to access the value received to:
 - make further payments electronically – specifically the lack of ATMs and POS terminals around Nigeria and the very low level of penetration of mobile money and mobile banking
 - convert the funds received into cash
- Increased formalization of MSMEs would not necessarily enable a further shift. Many of them already have bank accounts but choose (because of time, convenience, cost, or general preference) to use cash for payments.⁵¹
- The infrastructure available is sufficient to support bulk payments. In terms of RTC, what may impact any shifts is whether the availability and speed of response of the system are provided at acceptable levels.

Use case B: Remote bill and services payments

Use case assessment:

2.8

Possible to achieve shift tending to incremental progress

In this second use case, remote bill payments, a company such as a utility or finance company issues individual invoices and/or amount notifications at scale to their customers (individuals or organizations), and the customers then pay the amount due electronically. This use case, which includes government and business as the recipients, can be considered many-to-one. Some examples of this use case are shown in Table 9 below.

Banks and PSPs offer the ability to make electronic bills payments, both using dedicated bill payment functionality as well as EFT payments to a biller's account. Both banks and

nonfinancial companies offer the ability to collect payments in cash.

The low levels of access to utility services, such as reticulated water and electricity, in some cases reduce the potential of this use case.

Government tax collection takes place at a variety of levels, and the volumes and values collected are low across all. Private and public sector employees are under a pay-as-you-earn system for personal income tax. Self-employed people and companies are under a self-assessment regime; that is, they tell the various revenue authorities what they owe.

FIRS collects corporate income tax, VAT, the petroleum profit tax, a special tax for an education fund and an information technology levy; it also collects personal income tax for individuals in Abuja (FCT). State revenue authorities collect personal income taxes for their respective states, as well as capital gains and withholding taxes. Still other authorities are responsible for various customs duties.

TABLE 9 Use case B payment streams

Remote bill payments	Exists currently	% electronic by volume
Collection of taxes (P2G, B2G)	Yes	100% – Payments come from designated banks; means of first-stage payment is unknown
Utility payments (P2B, B2B, D2B, G2B)	Yes	1%
Collection of school fees (P2B)	Yes	Unknown
Paying of fixed monthly subscriptions (P2B)	Yes	Unknown
Paying off creditors – bills (P2B)	Yes	1%
Pension contributions (G2B, P2B, B2B)	Yes: Gov't, large formal employers remit their and employees' contributions to pension fund (7.5% of salary from each)	100%
Healthcare (P2G, P2B)	Yes	Unknown

For FIRS, individuals and businesses pay through 23 appointed banks, using a check or bank transfer.

The banks then send the funds electronically to FIRS using a Web portal. A Joint Tax Board is intended to harmonize practices, but the state revenue authorities do not report data to the federal level and hence FIRS does not know how revenues are collected.

FIRS staff emphasized that the agency's priority is establishing effective, efficient payment infrastructure; compliance in actual tax payment (by companies, estimated at under 75% of registered, formal businesses; by individuals, insignificant) is secondary.

The key findings of the analysis of incentives relating to this use case are:

- On the supply side, the availability of electronic bill payment facilities and inter-account EFT for paying creditors is a definite positive. However, the use of these facilities is low primarily as they are not marketed by the billers at a scale that will lead to general public adoption. Adoption at the level of formal businesses and government level has occurred.
- Examples serving the 'upper income' segment of the market such as the payment of satellite television subscriptions (DSTV) have proven successful.
- There is a definite awareness in the government of the benefits in promoting a shift to electronic, and Cash-less is one of the policy-based initiatives that the Nigerian government has promoted.

- Low financial inclusion and thus low access to electronic funds (related to access and cost but also to trust) is a key factor limiting the demand for electronic payments in the poorer portions of the population.

Pool of users:

- Bill issuers use diversified networks for collecting bills, which would not necessarily pass on savings if customers shifted to electronic. Even if there was a massive shift to electronic, bill issuers are likely to be at the end of the line in monetizing the benefits.
- Widespread, convenient, cost-free payments infrastructure is available for cash-based bill pay, while electronic payments is only available for a fraction of the population (those who already have a bank or mobile money account).
- Mitigating against the use of electronic payments, cash payments often feel more secure, convenient and untraceable and often bear no direct cost. These conditions create disincentives to migrate to electronic.
- The challenge/barrier to address is the lack of access to a pervasive electronic bill payments infrastructure evidenced by a lack of both field agents to receive cash payments and mobile banking/mobile money account holders to actually use the facilities to pay bills. The infrastructure to move the payment, once initiated, to the biller does exist and is

used by those with bank cards and accounts to fund their use of electronic payment initiatives.

Use case C: Card payments at merchants

Use case assessment:

3.8

Incremental progress tending toward likely to drift

This last use case consists of an individual who chooses to pay for goods or services at a merchant or store using a debit card, instead of paying with cash. The focus is on the debit card as it is the payment instrument issued to retail banking customers. In August 2013, 99% of all card transactions at POS by volume were debit cards (97.6% debit by value). Credit cards are not considered under this use case, as the issuance of credit cards in Nigeria is very low and insignificant in terms of the whole base of cards in issue.

Nigerian-issued debit cards are chip and PIN based with the CBN having mandated the switch from magstripe to PIN to be completed in 2009.

The key findings of the analysis of this use case are:

- The low use of the substantial POS network built in Lagos (and the other Cash-less states) requires addressing before this use case will become substantive.

- Despite the broad issuance of debit cards, people perceive cards as a means of accessing their cash. As ATM withdrawals are free (both on-us and off-us as per CBN Guide to Bank charges)⁵² and cash is readily accepted by merchants (cash carries no acquiring fee below the Cash-less thresholds set by the CBN, is free to deposit at banks and does not necessarily attract tax authority scrutiny), there is little pricing incentive for consumers to use their cards at merchants or for merchants to accept cards. At the same time, free cash withdrawals limit banks' business case for bearing the cost of ATM networks.

- 95% of POS usage by volume is in eight states with Lagos making up 72%, Abuja 10% and the next six states (Rivers, Ogun, Oyo, Bayelsa, Abia and Enugu) 13%. The remaining 29 states, where there are statistics reported, make up the remaining 5% of the POS usage.⁵³ The average POS terminal does six transactions a month. If only active POS terminals are used (20% of the installed base), this rises to 30 per month per active terminal.

- Existing conditions tend to limit the attractiveness of the acquiring business models for banks. The CBN has limited the acquiring commission to 1.25% and mandated that 75 bps will go to the issuer, 25 bps to the acquirer, and 25 to the terminal driver – a structure that makes the acquiring model uneconomic

- for the banks. Without a clear business proposition, the banks are reluctant to make any further investments to expand the POS network and are exploring other acceptance platforms such as mobile and Web.
- Given the limited demand for using cards for POS payments at merchants and the lack of enthusiasm from merchants to use POS terminals, as well as the costs associated to an acquirer and the low regulated acquiring margin as a supporting revenue source, the use of cards at merchants appears to be at a standstill.
- The GSM data network that the POS terminals rely on for real-time clearing of the debit cards is unreliable and merchants and PTSPs see this as a major obstacle to the adoption of debit cards at merchants. The need to have real-time clearance of the transactions in a retail environment is critical and this unreliable and often unavailable payment channel does not currently meet this requirement to a level where customers and merchants can rely on POS payments.



6 Lessons about sequencing and prioritizing the shift

Status of the journey

The 2012 Better Than Cash Alliance whitepaper hypothesized three key shifts on the journey to becoming a 'cash lite' economy. This analysis of Nigeria confirms that these tend

to proceed sequentially at different speeds and with different trajectories.

Figures 18, 19 and 20 show the extent of the shifts by volume and value.

FIGURE 18 Status of shifts - by volume

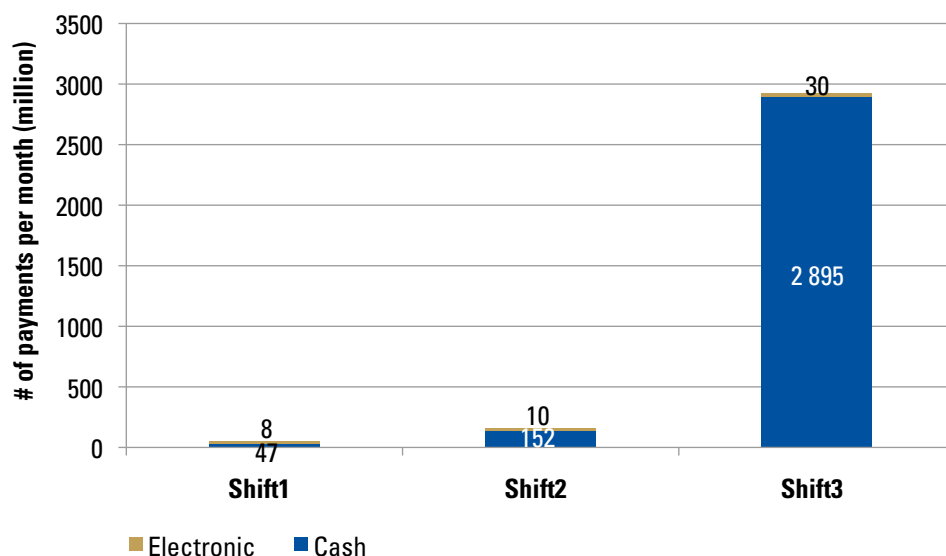


FIGURE 19 Status of shifts – by value

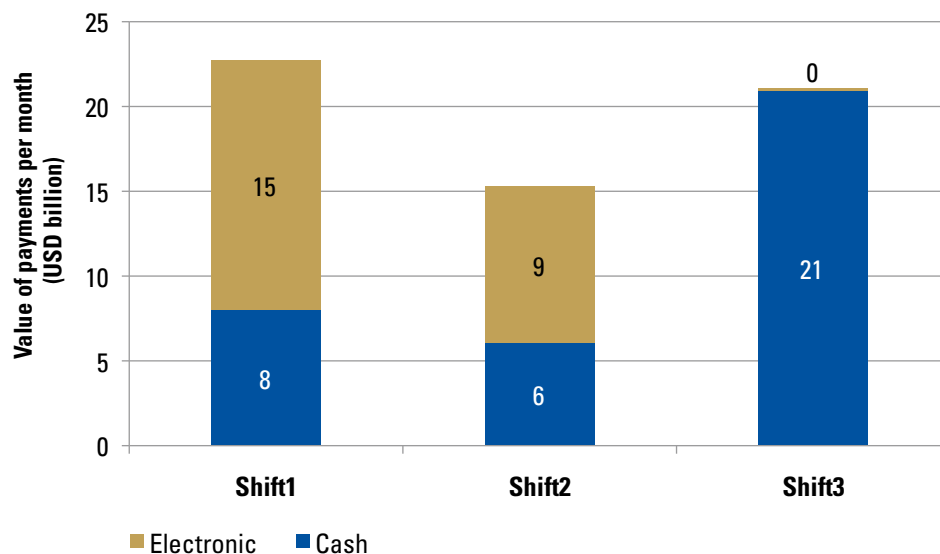
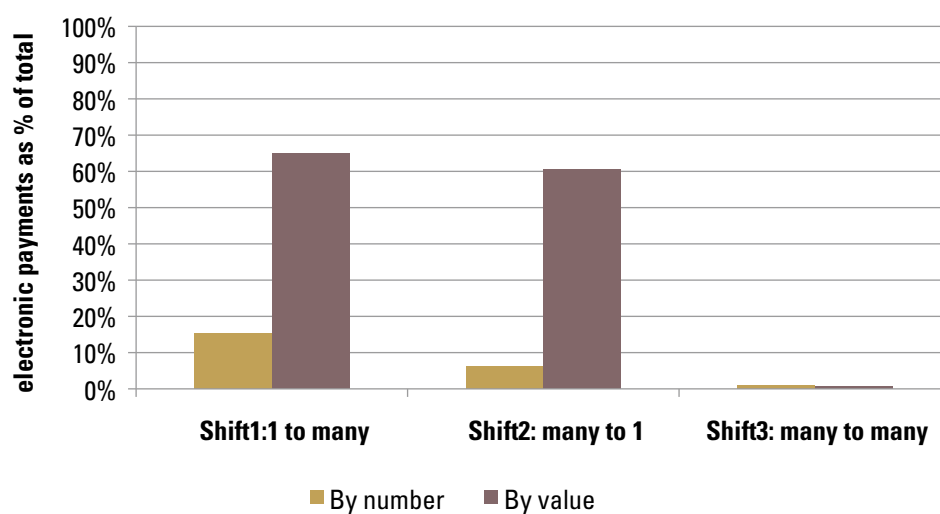


FIGURE 20 Status of shifts – by volume and value



Shift 1: From cash heavy to bulk payer transition

This first shift is well underway in terms of value, since 62% of the *value* of bulk payments is already made through electronic transactions, and 44% of the volume.

Nevertheless, the trajectory rating suggests that this shift will continue as long as the main difficulties are addressed adequately. This needs to occur simultaneously with increasing access to financial services and driving the trust of individuals in the formal banking sector.

Shift 2: From bulk payer transition to increasing electronic usage

Once many people have formal accounts and are comfortable with authorizing electronic payments, the second shift, one of increased individual payments to a single provider (“many to one”), can take place.

The evidence suggests Nigeria has not yet made significant progress on Shift 2. Only 10% of bill payments (including taxes) by value have shifted to electronic, although these constitute 12% of the value as shown above.

Low financial inclusion as a result of limited access to payment channels remains an important barrier in limiting the demand for electronic bill pay. The recent expansion of the retail payment infrastructure in Nigeria is promising (including the mobile interface to NIP), but to date, this has been driven from the supply-side, where financial service providers face

pressure (from government and the minority of more affluent customers) to drive cash transactions out of formal distribution points (such as bank branches). The early traction of MMOs around bill payment, at least in the middle segments, suggests that there is pent up demand for this use case, if customers will come to trust and use mobile-linked accounts. Ultimately, success in shifting this use case will depend on the widespread uptake and usage of mobile-related payments.

Shift 3: From increasing electronic usage to cash lite

This shift is both the largest and the hardest in all countries. It is certainly at an early stage for Nigeria. Barely 1% of the volume of transactions and 1% by value are taking place through electronic means.

As the trajectory score indicates, incentives for providers and merchants remain constrained around card-based POS usage today.

The trajectory of this shift in Nigeria will depend ultimately not only on a greater level of financial inclusion of payers but also on incentivizing the merchants who work with the cash pools still present in the informal economy. P2B payments clearly represent the biggest sticking point for massive conversion of payment volumes to electronic form.

Comparison to MasterCard “cashless journey”

In 2013, MasterCard Advisors published its “cashless journey” scoring for Nigeria, alongside 32 other nations. This scoring focuses on the

consumer payments aspects of the economy, corresponding mostly to the second and especially the third shift described in this document.

The cashless journey rating is a sum of three components:

- i. Share: the calculated 2011 share of non-cash consumer payments by value
- ii. Trajectory: a measure of the historic change between 2006 and 2011
- iii. Readiness: a measure of the future-looking potential for converting cash to electronic payments

Figure 21 below, from the MasterCard report, compares Nigeria's score on each of the three elements: It shows Nigeria as near the bottom end of the range among the 33 countries in the study. This ranking places

Nigeria among the largest group of the countries surveyed, with a pace of change to electronic in line with expectations from a low base.

As discussed earlier, the share estimates in the cashless journey report for Nigeria are similar for consumer payments by value to those found in this diagnostic. The readiness score corresponds most closely to the trajectory scoring of use cases done here, and the findings are broadly similar. Although much has been done on the policy front and certainly the bulk payer shift is well underway, the overall incentives for the rollout of the consumer-based use cases are not yet strong enough to accelerate the trajectory significantly.

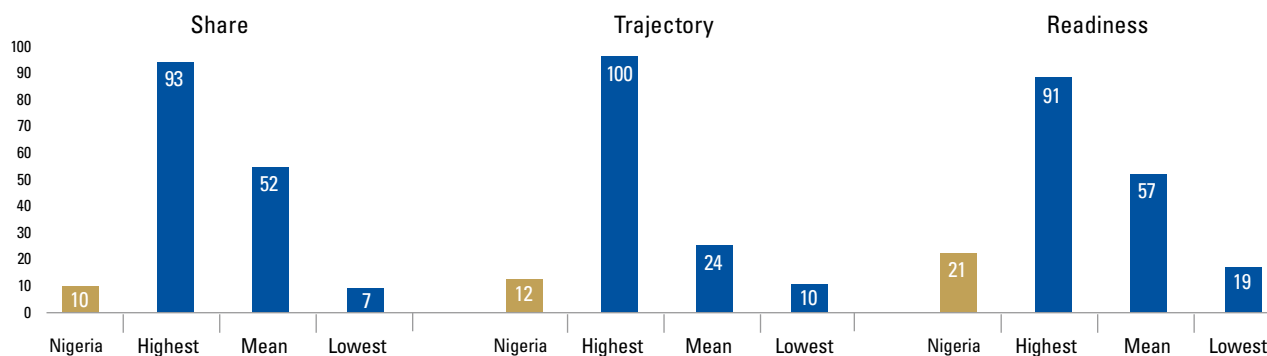
The MasterCard report on Nigeria suggests some grounds for optimism: "Going forward, increased consumer expenditure from the growing middle

FIGURE 21 Nigeria in perspective from MasterCard Advisors cashless journey

The study measures three indicators of progress along the cashless journey:

1. **Share:** a calculation of the share of non-cash consumer payments of the total value of consumer payments
2. **Trajectory:** a measure of the shift in cash share of consumer payments' value between 2006 and 2011
3. **Readiness:** a measure of the potential for conversion of cash payments to electronic payments.

The Cashless Journey findings for **Nigeria** are:



Source: MasterCard Advisors (2013) *Cashless Journey: Spotlight on Nigeria*

class can be expected to spur the shift to more cashless payments. The move will be supported by the government push for financial inclusion and integration of the country's huge unbanked population through the implementation of a national Identity card enabled for electronic benefits through EMV technology."

To those forces, this diagnostic adds the perspective of how the Cash-less

policy is starting to nudge Nigerian companies to shift payment behavior on their collections and payments, and as this gathers momentum, it is likely to create a more positive trajectory in the short to medium run. For this reason, the case studies proposed for the DRFRP in the next section target better understanding of this key area of shifting.



7 Proposed DRFRP approach in Nigeria in 2013-2014

Potential case studies

Case 1

Audience:

BUSINESS, GOVERNMENT

Use case:

#1: MASS ELECTRONIC CREDIT;

#2: REMOTE BILL PAYMENT;

#3: CARD PAYMENT AT MERCHANT

Outcome:

SUCCESS

Access to data:

VERY LIKELY

The Better Than Cash Alliance diagnostic for Nigeria identified several specific stories of shifting from cash to electronic payments in Nigeria that could generate lessons for the Alliance's stakeholders during the DRFRP program which ends in Q2 2014. Given the preceding analysis, these experiences come largely from the business sector and can help to fill in the Alliance's understanding of incentives and practices in this key sector.

Composite case: mini-cases of corporate supply chains as catalysts for shift to electronic payments

The CBN's push for electronic payments, exemplified by the

Cash-less Nigeria policy, has through a combination of requirements and inducements, caused large companies to shift the way they make and receive payments. Whereas the public campaign for Cash-less is focused on payments made by individuals, through promotion of POS payments at merchants, the bigger impact on Nigerians' payment behavior may instead come from the top down. The way companies structure their value chains could have far-reaching implications for how smaller businesses – as suppliers and vendors – make and receive their own payments. In this way, the CBN is pushing the private sector to be a driver of the shift to electronic payments.

This proposed case study would encompass four or more mini-cases of companies in different industries. Together, they would provide lessons on how shifting certain payment to electronic means can benefit both the companies and their value chain partners.

Citibank, a Better Than Cash Alliance funder, recommended three corporate clients that were early adopters of its CitiDirect banking platform. Interviews conducted for the diagnostic

identified a fourth company, and more mini-cases (possibly up to six total) could be added.

Leadway Assurance, a commercial and individual insurance company, makes all of its payments (claims, salaries, agent commissions, supplier payments) through bank transfers. Leadway was the winner, in the corporate category, of an award granted by the CBN this year for shifting payments to electronic means. Nigerian Bottling Co., the local Coca-Cola bottler and the first runner up in the CBN's multinational category, makes electronic salary, vendor, and tax payments, but the most interesting part of its story is its efforts to encourage dealers to open bank accounts. Grimaldi Nigeria, which runs shipping lines and operates the port at Tin Can Island in Lagos, makes electronic salary and vendor payments and now receives about 50% of incoming payments from shipping agents through POS terminals. And finally, Fan Milk, a large dairy company, has contracted with FETS (Funds & Electronic Transfer

Solutions), a mobile money operator, and now requires its dealers to pay via mobile money – by cashing in with FETS agents at the Fan Milk distribution centers.

This case study would measure the costs businesses pay for making and receiving payments through various means, and where possible measure the cost savings of shifting certain payment streams to electronic means. The companies would serve as the base for the case, but their suppliers' and vendors' costs would also be measured in order to understand the downstream effects of the companies' efforts to shift. This case study could help companies in other contexts understand the costs and effects of shifting to electronic payments; and it could help policymakers understand the private sector's reaction to cash lodgement fees and such a policy's wider impact.

Citibank and each of the four companies above have expressed interest in facilitating this case and sharing data.

TABLE 10 Value chain mini-cases

	Industry	Payment type of interest
Leadway	Insurance	Outgoing: Claims; Incoming: Challenges of direct debits
NBC	Fast-moving consumer goods	Incoming: Dealers' purchases through bank transfers
Grimaldi	Shipping	Incoming: Shipping agent payments with POS
Fan Milk	Fast-moving consumer goods	Incoming: Franchise-taker purchases with mobile money

Case 2

Audience:

BUSINESS, GOV'T, DEV. PARTNERS

Use case:

#1: MASS ELECTRONIC CREDIT

Outcome:

SUCCESS

Access to data:

LIKELY

Agricultural subsidies as a catalyst to develop mobile money agents in rural areas

Prior to 2012, Nigerian farmers got their fertilizer from state-level outlets at subsidized rates; the federal government issued tenders for suppliers, sold the fertilizer at a discounted rate to the states, and then the states discounted it further for farmers. But this system allowed for leakages at every level, from contracting down through disbursement, and an informal market developed for re-selling subsidized fertilizer that was intended for low- or no-cost distribution.

The Ministry of Agriculture and Rural Development then transformed this system into the Growth Enhancement Support (GES) Scheme. Now, each farmer is mapped and assigned to a nearby agricultural dealer. At planting time (twice a year, during the wet and dry season), the farmer gets credit deposited to his or her mobile phone from the government equal to 50% of the cost of a basic set of inputs (a combination of fertilizer and seeds, depending on the area); the federal and state governments each pay a portion of the cost. The farmer then takes the mobile phone to the agricultural dealer, along with the other 50% of the cost

in cash. The subsidy is transferred to the dealer's mobile wallet; the cash is handed over; and the farmer gets the inputs. Finally, using a debit card, the dealer can cash-out his mobile wallet at an ATM – he is a mobile money agent.

The mobile money operator (MMO) that implements the GES scheme is Cellulant; the approximately 800 agricultural dealers in the scheme are all Cellulant agents. This use of mobile money for government subsidies (it is a G2B subsidy, to the dealers) has been written about elsewhere and promoted heavily by the government; it was even the subject of a brief report by the National Association of Nigerian Traders. But previous accounts have focused on the scheme's impact on agricultural yields and farmers' perceptions of the new payment method.

This case study, instead, would focus on Cellulant's developing agent network: How can a government subsidy fuel the rollout of an agent network that allows for mobile channel-based financial services besides subsidies, such as P2P transfers and purchases at merchants? It will measure the costs and cost savings to government of implementing the subsidy through this mechanism and seek to understand Cellulant's business case and costing assumptions for leveraging the GES scheme for further business. And, through an additional measurement activity discussed below, it will explore the incentives for agricultural dealers and other potential mobile money agents to offer cash-in/cash-out and other services in rural areas.

In addition to being valuable for MMOs and government policymakers, this case study could be valuable for development partners interested in using cash-transfer schemes to, in part, promote the development of the national payments system.

Representatives from Cellulant were interviewed for this diagnostic, and they have expressed willingness to take part in a case study, as has the Ministry of Agriculture.

Case 3

Audience:

BUSINESS

Use case:

#2: REMOTE BILL PAYMENT

Outcome:

SUCCESS

Access to data:

LIKELY

Payment Service Provider illustrates the evolution of a B2B cash payment product to an online, low value P2P/P2B product

InterSwitch is the second largest private payment service provider in Nigeria, after Unified Payments. InterSwitch houses a retail payment switch for card and EFT transactions and also provides value-added services to its banking and corporate clients in the retail payment services market.

InterSwitch created a B2B retail payment product called Pay Direct approximately 10 years ago that allowed customers to use the equivalent of a banker's check to pay for goods and services. The product required business clients to go to a bank to get the certificate issued,

paying in cash and receiving a certificate that could be exchanged for services where it was honored by the merchant or service provider. The product was mainly used for large payments, particularly durable goods. While popular, the product was not viable at scale and required significant administration.

Once InterSwitch migrated to an online technology platform it moved the Pay Direct model online and created a product called "Bills Online," which enabled lower value P2B payments. One of the first clients for this product was DSTV.

During this period InterSwitch created the "Verve" payment card for domestic transactions and also partnered with MasterCard as their domestic processor. At this stage InterSwitch renamed the online payment platform "QuickTeller" and began to market the product more aggressively as a low-value P2P and P2B electronic payment solution. The most significant change to the product in its inception phase was the addition of airtime recharge, at no cost to the customer (commission fee shared with MNO's). After a slow start the transaction volume increased rapidly due to a series of transportation strikes which had most people in Lagos locked in and unable to travel. There was a high demand for airtime during this period and without the ability to travel, people reverted to QuickTeller. From this stage the usage of the service has continued to grow strongly.

QuickTeller charges a fixed N100 fee for all transactions other than airtime top-up. Revenue sharing varies based on the provider.

The case of QuickTeller shows an evolution of a payment product from a cash-based large-value certificate to a small-value, high-volume P2P and P2B platform. It would be interesting to explore the various strategic decisions that InterSwitch undertook to move from Pay Direct to QuickTeller. What was their vision? Can they quantify cost savings? Where will future growth come from? What's the role for mobile?

Case 4

Audience:

GOV'T, BUSINESS

Use case:

#2: REMOTE BILL PAYMENT

Outcome:

SUCCESS

Access to data:

LIKELY

Payment service provider helps schools move to electronic payment platform for fees and other associated benefits

CitiServe is the third largest payment service provider in Nigeria. CitiServe is a regulated Payment Terminal Service Provider and also manufactures POS devices for the African market.

Nearly all schools in Nigeria accept payments in cash. These payments generally come in high volumes at the beginning of the school term, twice a year. In many cases cash payments are collected by teachers in the classroom. Teachers then pass the funds to the school administration.

However, the cash-based system is prone to significant leakages. In some cases teachers did not pass on funds to the school, leading to more students in the classroom than

could be covered by the resources available from fees. This led to lower quality service provision from schools. However, many schools were not entirely aware of the extent of the problem.

CitiServe approached several schools with a service proposition to convert regular cash payments into electronic payments. CitiServe sold the service as a value-added service, arguing that the school would benefit from greater efficiencies across the board in terms of its treasury function and management of school resources.

For the few schools that adopted POS payments and EFT for fees, the benefits have gone beyond just payment efficiencies. The schools have been able to more easily identify teachers who did not remit the full amount of school fees and remove them from their respective positions. They have also been able to use the data from the electronic payments to more readily manage their cash flow throughout the year, providing more reliable and higher-quality services to students.

It would be interesting to explore with the schools the precise “knock-on effect” they experience when they moved to an electronic platform. What problems did they expect to solve with electronic payments? What other problems were solved with the shift? Can they put a number to the cost savings? What impact has this had on the quality of service?

For CitiServe, it would be interesting to hear how they made their case to the schools, particularly if the parents who pay electronically begin to use electronic payments in

other aspects of their lives. CitiServe noted in interviews that school fee payments was one of its fastest growing segments. It would be useful to understand the context behind this growth, particularly if the benefits can be translated to other business types.

Additional measurement activities

The additional measurement activities described below and in Table 11 could fill gaps in the available data on payments in Nigeria, thereby improving the Data Quality Index, support case studies on attempts to shift, and develop methodologies for key Better Than Cash Alliance issue areas of interest.

Survey of traders on payments and barriers to shifting to electronic

Data on payments made and received by small- and medium-sized businesses was the hardest to come by during this diagnostic. The SMEDAN-NBS survey asked businesses about their overall expenditures and relationships with formal financial institutions. But small-scale interviews with traders suggest that having a bank account does not necessarily translate into using – or even wanting to use – electronic payments.

A quantitative survey of these types of traders would examine the barriers between formal financial inclusion and the shift from cash-based payments to electronic ones. It could also allow the Alliance to test a quantitative method of measuring the cost of

various payment instruments to small- and medium-sized businesses.

Nigerian small-scale traders account for about half of Nigeria's microbusinesses, which contribute the majority of Nigeria's employment. Not only is small-scale trading important within the employment and GDP landscape, it is also particularly important to the push towards digitization as traders generate small, high-frequency transactions. The number of transactions they contribute to the national payments space is likely to be significant.

The NBS has expressed willingness to implement a population-representative survey of Nigerian small-scale traders across one or two important regions within Nigeria, including developing the sampling plan. The survey instrument would cover not only the size, frequency, mode and geographical coverage of each payment, but also identify blockages in each of the payment process steps. However, whether NBS can in fact complete the survey in time for the DRFRP needs further discussion if this activity is approved.

Support for enhanced Payment component of EFINA's Access to Financial Services in Nigeria Survey

EFInA currently implements a semi-regular national survey on financial inclusion called Access to Financial Services in Nigeria (A2F). The next iteration is due to be implemented in 2014. Previous surveys have focused on respondents' relationship to formal and informal financial institutions and services. They have not looked at

respondents' volumes and values of payments or the means of payment. With Better Than Cash Alliance support, EFINA could enhance the payment section in the upcoming 2014 A2F survey, although the case would have to be made to EFINA of the value of the additions or changes, alongside other changes to the survey instrument to be considered in early 2014 for the 2014 round. Given that the A2F survey is focused on individuals, it could ask about the most recent payments made, to whom and in what size and form. It could also ask about general payment behaviors, as well as how income is received, i.e., whether in cash or electronically. These changes would be highly leveraged since it would mean getting statistically accurate payment data on the adult population as a whole, although this would not be available until late 2014. The outcomes would certainly benefit the Better Than Cash Alliance cause in

Nigeria by filling large measurement gaps relating to individuals, and would also help test a question set which could be used in other country-level inclusion surveys elsewhere.

1-on-1 interviews with agricultural dealers on the business case for being an MMO agent

This measurement activity would be linked to proceeding with the case study on the GES scheme described above. Using a local market research firm, interviews could be conducted in three or four agricultural regions around Nigeria with Cellulant agents, as well as with other agricultural dealers not currently participating in the GES scheme. Interviews and financial data collected from the dealers would reveal the business case for participating in the GES scheme and for offering further mobile money agent services in the future.

TABLE 11 Potential additional measurement activities

Activity	What would be measured	Measurement approach	Estimated cost, time and recommended agency
Survey of traders	Payment flows, cost of payment instruments	Quantitative survey in key regions	\$50,000 — 4 months, NBS
A2F survey payments module	Payment flows, payment instrument preferences	Nationally representative survey	Potentially no direct cost; questionnaire finalized in Q1 of 2014; results by Q4
Interviews with MMO agents	Payment flows, cost of accepting payment instruments and offering agent services	1-on-1 interviews	\$12,000 — 6 1-on-1 interviews and 1 FGD in each of 3 market centers

Annexes

Annex A. List of acronyms

ACH	Automated Clearing House	MMO	Mobile Money Operator (bank or non-bank licensed under CBN mobile money framework)
ATM	Automated Teller Machine		
B	Business		
BFA	Bankable Frontier Associates	mPOS	Mobile POS device
BTCA	Better Than Cash Alliance	NACS	Nigerian Automated Check Clearing System
B	Business	NBS	National Bureau of Statistics
CCT	Conditional Cash Transfer	NIBSS	Nigerian Inter-Bank Settlement System
CBN	Central Bank of Nigeria	NIP	NIBSS Instant Payment
D	Donor or Development Partner	NEFT	NIBSS Electronic Funds Transfer
DDA	Demand Deposit Account	OAGF	Office of the Accountant General of the Federation
DRFRP	Development Results Focused Research Program	OTC	Over the counter
EFinA	Enhancing Financial Innovation and Access	P	Person
FIRS	Federal Inland Revenue Service	POS	Point of Sale
GDP	Gross Domestic Product	PSV2020	Payment System Vision 2020 (report)
GIFMIS	Government Integrated Financial Management Information System	PTSP	Payment Terminal Service Provider
GNI pc	Gross National Income per capita	RTC	Real Time Clearing
G	Government	RTGS	Real Time Gross Settlement
IBFT	Inter-Bank Fund Transfer	SMS	Short Messaging Service
KYC	Know your Customer	STP	Straight-Through-Processing
MDA	Ministries, departments and agencies	TSA	Treasury Single Account
MDR	Merchant Discount Rate	USAID	United States Agency International Development
MFIs	Micro Finance Institutions	USD	United States Dollars
		WB	World Bank

Annex B. Detailed payment grid

Definitions

The measurement component of the Better Than Cash Alliance diagnostic has three main goals: The first is to evaluate the current status of the shift to electronic payments. This snapshot of the payments landscape provides a baseline to aid the Nigerian government in its efforts to strategically shift concentrations of cash and evaluate the impact of policy efforts. The second is to identify and catalogue best practices and cost-effective approaches to determining the baseline. The third is to provide insight into knowledge gaps and priorities for the recommendation of additional measurement activities.

The diagnostic includes an estimated number of payments between each pair of parties in the country: payers (government, G; businesses, B; persons or individuals, P; and development community partners,⁵⁴ D) and payees (G, B and P). Though values are captured, the focus is on the volume of payments. This is to highlight the progress of financial inclusion, a key area of interest for Better Than Cash Alliance stakeholders, and one where payments are low-value and high-volume; government and business payments may dominate values, but individuals make the most number of payments in an economy. Specific payment data points included may vary slightly according to what information is available and relevant to the payments story in each country. Note that payment figures exclude:

- Payments between financial intermediaries (interbank payments) since these are usually to settle underlying transactions that have been made or else related to investment only; and
- Payments between accounts of the same party (inter own account transfers) or between different stores of value (account to cash) of the same party (e.g., ATM withdrawals).

But that they include:

- Payments between overseas workers and receivers in-country (international remittances)

The estimated proportion of electronic payments refers to the proportion of the number of payments (as opposed to value) that are initiated electronically.

Payment grid

	# of payments p.m.	% volume electronic	# of payments Electronic	Avg. Value per payment LCU	Total Value LCU Monthly	Total Value USD	% value elec.	Source
G2P total	4 175 434	62%	2 575 485		360 067 009 345	\$2 316 471 547	61%	
Government: Employees Federal	1 107 000	61%	675 270	129 660	143 533 333 333	\$923 413 904	61%	2011 Summary of Federal Govt Finances (CBN Annual Report); Public news articles
Government: Employees State	875 000	61%	533 750	64 781	56 683 333 333	\$364 669 146	61%	2010 Summary of State & FCT Finances (CBN Annual Report); Public news articles
Government: Employees local	620 000	61%	378 200	100 551	62 341 666 667	\$401 071 726	61%	2010 Summary of Local Govt Finances (CBN Annual Report); Public news articles
Government: Pensioners	73 000	100%	73 000	32 370	2 363 000 000	\$15 202 232	100%	Pension Commission
Government: CCTs	1 500 434	61%	915 265	63 412	95 145 676 012	\$612 114 539	61%	ODI Report, New America Foundation Global Assets Program; Public news articles
G2B total	319	100%	319		172 514 949 760	\$1 109 865 559	100%	
Government: National suppliers	319	100%	319	540 799 216	172 514 949 760	1 109 865 559	100%	Bureau of Public Procurement
G2G total	1 640	100%	1 640		937 600 000 000	\$6 031 998 672	100%	
Government: Federal Government intra-agency transfers	5	100%	5	95 800 000 000	479 000 000 000	\$3 081 620 482	100%	2011 Summary of Federal Govt Finances (CBN Annual Report)
Government: Federal Transfers to States	37	100%	37	6 713 513 514	248 400 000 000	\$1 598 067 908	100%	FAAC Report January 2013
Government: Federal Transfers to LGUs	799	100%	799	176 846 058	141 300 000 000	\$909 045 875	100%	FAAC Report January 2013
Government: State Transfers to LGUs	799	100%	799	86 232 791	68 900 000 000	\$443 264 408	100%	2011 Summary of State Govt Finances (CBN Annual Report)
Government Total	4 177 393	62%	2 577 444		1 470 181 959 106	\$9 458 335 778	91%	
B2G total	180 305	100%	180 305		353 775 000 000	2 275 992 246	100%	
Corporate tax payers + Individual business	180 305	100%	180 305	1 962 092	353 775 000 000	2 275 992 246	100%	Federal Inland Revenue System
B2P total	48 661 884	9%	4 619 343		665 185 725 220	4 279 436 232	9%	
Large businesses: Employees	7 562 157	61%	4 612 915,77	45 000	340 297 065 000	2 189 282 684	61%	World Bank Enterprise Survey; Gallup 2012 study; International heuristics
Medium businesses: Employees	2 667	31%	813,44	36 125	96 345 375	619 833	31%	NBS MSME Survey
Small businesses: Employees	36 811	15%	5 613,68	14 644	539 062 780	3 468 031	15%	NBS MSME Survey
Informal businesses: Employees	41 080 249	0%	-	7 893	324 253 252 065	2 086 065 685	0%	NBS MSME Survey
B2B total	142 286 914	2%	2 826 835		4 369 991 050 002	\$28 114 100 054	48%	
Large businesses: Supplier	1 712 500	80%	1 370 000,00	728 581	1 247 694 962 500	8 026 977 770	80%	Federal Inland Revenue System; International heuristics
Medium businesses: Supplier	165 400	30%	49 620,00	364 291	60 253 648 700	387 638 576	30%	NBS MSME Survey
Small businesses: Supplier	318 960	0%	-	273 677	87 292 122 240	561 589 127	0%	NBS MSME Survey
Informal businesses: Supplier	86 308 765	0%	-	13 464	1 162 095 735 466	7 476 279 792	0%	NBS MSME Survey
Large businesses: Operational	1 712 500	80%	1 370 000,00	770 667	1 319 766 666 667	8 490 647 164	80%	Federal Inland Revenue System; International heuristics
Medium businesses: Operational	124 050	30%	37 215,00	385 333	47 800 600 000	307 522 564	30%	NBS MSME Survey
Small businesses: Operational	159 480	0%	-	227 797	36 329 003 390	233 720 670	0%	NBS MSME Survey
Informal businesses: Operational	51 785 259	0%	-	7 893	408 758 311 040	2 629 724 391	0%	NBS MSME Survey
Business Total	191 149 103	4%	7 626 483		5 388 951 775 222	\$34 669 528 532,80	49%	
P2G total	380 155	100%	380 155		63 516 666 667	\$408 631 025	100%	
Personal tax	380 155	100%	380 155	167 081	63 516 666 667	\$408 631 025	100%	Federal Inland Revenue System
P2B total	2 877 550 617	1,22%	35 103 813		2 046 139 177 313	\$13 165 282 256,12	2%	
People: Consumption less utilities	2 718 000 000	1,00%	27 180 000	549	1 491 527 285 529	\$9 597 216 775	1%	Consumption Pattern Survey, GHS 2009, Internal heuristics
People: Bill Pay	153 750 617	1,38%	2 123 813	3 445	529 611 891 784	\$3 407 229 339	1%	Consumption Pattern Survey, GHS 2009, Findex
People: Pension contributions	5 800 000	100,00%	5 800 000	4 310	25 000 000 000	\$160 836 142	100%	Pension Commission
P2P total	68 940 000	4,84%	3 333 600		213 299 538 467	\$1 372 250 995	6%	
People: Domestic Remittances	68 340 000	4%	2 733 600	3 062	209 282 871 801	\$1 346 409 988	4%	Efina Study, Gallup 2012 study
People: International Remittances	600 000	100%	600 000	6 694	4 016 666 667	\$25 841 007	100%	CBN
Person Total	2 946 870 772	1%	38 817 568		2 322 955 382 447	\$14 946 164 276	5%	

Methodological deep-dives

Quantifying the payments made in Nigeria required a number of assumptions and calculations where data was unavailable, incomplete, or unreliable. This section discusses the approaches used for the G2P and P2B cells in the payment grid. Better Than Cash Alliance can provide methodological information on other cells by request.

G2P: Only a fair amount of government payment data is readily available online

The Better Than Cash Alliance diagnostic team calculated key metrics for G2P payments from a variety of government sources, as shown in Tables B1 and B2 below.

TABLE B1 High-level view of government-to-person payments

Total number of payments per month	% electronic (by volume)
4.2 million	62%

This report calculates government-initiated payments using many sources: publicly available statistics from the Central Bank of Nigeria (CBN) website, interviews with Pension Commission officials, previous studies and press search. The measurement assumes that there are three categories for G2P payments: salary payments, pension payments, and social transfers.

For salary payments, the total value for each level of government (central, state, local) was obtained from the Summary of Government Finances, which is available in Central Bank Nigeria's annual report. However, the number of employees was collected from press search while the percentage of electronic payments used the results of a study on payment behavior in sub-Saharan Africa.⁵⁵ The study found that 61% of respondents in Nigeria receive payments from government agencies or employers through transfer from banks or financial institutions and mobile phone money transfer.

Data for pension payments was obtained from in-country interviews with Pension Commission officials. Officials revealed that pension payments are all made via bank accounts. The diagnostic team obtained information on the number of retirees receiving pension payments (either lump sum, monthly or through annuity), as well as total values and average payment amounts.

Data on social transfers were not readily available. Estimates were made using official figures for the number of beneficiaries, and total payments from project reports, new articles, and a study on Social Protection by Overseas Development Institute (ODI).⁵⁶ In order to estimate the percentage electronic, the diagnostic team relied on the previously cited study on payment behavior in sub-Saharan Africa.⁵⁷

P2B: Estimating how individuals transact with business

TABLE B2 High-level view of people-to-business payments

Total number of payments per month	% electronic (by volume)
2.87 billion	1.22%

Individual-to-business payments were broken down into three categories: purchases, bill pay, and pension contributions.

To estimate purchases and bill pay, the diagnostic team relied on a number of data sources: 2009/2010 Consumption Pattern Survey, General Household Survey 2009 (both from the National Bureau of Statistics), the Findex database, and international heuristics. Additionally, interviews with officials from Pension Commission provided information on pension contributions.

The Consumption Pattern Survey provides aggregate household consumption for 11 expenditure categories. The diagnostic team classified these into two categories: purchases and bill pay. This classification aimed to obtain the total value of purchases and bill pay at an aggregate level. Using the same classification process, estimates for average household expenditures for each category were obtained using the General Household Survey.

The diagnostic team estimated the proportion of bill pay done using electronic means from Findex data. The diagnostic team was unable to obtain reliable information in-country on the degree of cash usage in consumer P2B payments; therefore, our estimate for the percentage of consumer payments made electronically was borrowed from MasterCard Advisors.

Annex C. Better Than Cash Alliance Country Diagnostic common methodology

Measurement and data quality

The measurement approaches use all available data to compile the payments grid as accurately as possible as described in detail in Annex B for Nigeria. This process involves finding and analysing a wide range of different data sources of different time intervals and quality. In some cases, extrapolation or interpolation is necessary to make up for gaps in data availability. For this reason, and to be explicit about the basis from which data is drawn, the data relating to each payer group in the grid is assessed for data quality and availability, as shown in Table C1 below.

TABLE C1 Data quality ratings

Rating	Data quality	Data availability
5	Complete, recent, and from credible sources	Available from one or few up-to-date websites or online publications
4	Recent and from credible sources. 1-2 components of estimate based on expert opinion or assumptions.	Available from disparate websites or from a combination of scholarly and popular publications
3	Incomplete, recent, and based on expert opinion or available data. Few assumptions required.	Available in-person through simple records requests or interviews with public-facing officials
2	Incomplete and/or outdated, and informed by local sources, ad hoc research, and international heuristics. Some assumptions required.	Available from proprietary sources through non-disclosure agreements
1	Incomplete and/or outdated, and informed by local sources, ad hoc research, and international heuristics. Multiple assumptions required.	Additional measurement activities required to capture meaningful data

The overall scores cited on the first page are simple averages across the underlying picture.

Trajectory scores

To understand the trajectory of the move towards electronic payments in a country and the likelihood that the momentum may change, the diagnostic focuses on selected payments use cases and then considers the infrastructure and incentives supporting each.

Use cases

A payment use case is a cluster of characteristics (the store of value, the nature of the instrument itself and the channels through which it is initiated) around a common payment application. For example, bulk credit transfers involve transfers across bank accounts under rules particular to the automated clearing house involved, which can be initiated in-branch or via channels such as Internet or dedicated line.

Ratings

The propensity for this use case to accelerate the shift to electronic payments is assessed using the scale shown in Table C2.

TABLE C2 Use case trajectory ratings

Rating	Conditions & incentives are such for this use case that it is:
1	Highly likely to support a full shift
2	Possible to achieve a full shift
3	Likely to lead to slow incremental progress
4	Likely to drift without clear upward trend
5	Unlikely to lead to shift

To get to an overall rating, a process of interviews and in-country engagement leads to an assessment of the infrastructure and the incentives of each of the key constituencies in the payment eco-system – government, business, financial providers and consumers – to use this instrument for the accompanying shift. As shown in Annex D for this country, the overall score for each use case is the simple average of the underlying ratings across each category, although the scores for each category are not simple averages of the underlying sub-categories. This is because the sub-categories are not weighted; so the category score is assigned based on an overall assessment taking into account the sub-category scores.

Glossary of general payment terms used⁵⁸

Term	Definition
ACH/ Automated Clearing House	An electronic clearing system in which payment orders are exchanged among financial institutions, primarily via magnetic media or telecommunications networks, and handled by a data processing centre
Gross Settlement System	A transfer system in which the settlement of funds or securities transfer instructions occurs individually (on an instruction by instruction basis)
Large Value (wholesale) Payments	Payments, generally of large amounts, which are mainly exchanged between banks or between participants in the financial markets and usually require urgent and timely settlement
“Not on us” & “On us”	Payment terms which refer to whether a payment is made in the accounts of the same financial institution (on us) or across financial institutions (not on us)
Payment Instrument	Any instrument enabling the holder/user to transfer funds
Payment scheme	A term used for a payment system which includes a brand and set of rules licensed by the owners to the participants, such as the international card association schemes
Payment service provider (PSP)	Entity that does not participate directly in a payments system but specializes in managing payment transactions for the public
Payment stream	A cluster of payment use cases
Payments system	A payments system consists of a set of instruments, banking procedures and, typically, interbank funds transfer systems that ensure the circulation of money
Payment use case	A description of an individual payment that identifies the payment's store of value, the payment instrument used, and the channel through which payment instructions are issued
Real-Time Gross Settlement (RTGS) System	The system used to effect continuous (real-time) settlement of funds or securities transfers individually on an order by order basis (without netting)
Switch	In payment context: an electronic software program which enabled different devices and financial operating systems to connect for the purpose of exchanging information

Annex D. Use case trajectory scores

TABLE D1 Summary of components of scores

Note overall score is the simple average of the headline numbers in each of the five main categories (shown in bold); the underlying sub-cores are used as indicators to arrive at the headline in each case.	Mass electronic credits	Remote bill payment	Debit card at merchants
Country environment	2.0	3.0	3.0
Legal environment for electronic payments sufficiently clear and certain to support shift	3	3	3
The communications and processing infrastructure supports robust transaction processing	2	2	4
There are a variety of providers offering the service defined in priority use cases on a competitive basis	1	2	3
The oversight environment for payments is clear and certain	3	3	3
The settlement and clearing infrastructure supports the defined use case	1	1	2
Government	2.0	3.0	-
There is a clearly identified national lead agency responsible for the shift to electronic	2	2	-
The lead agency has the mandate and qualified resources sufficient to coordinate the shift across departments/agencies	3	4	-
The national government at least monitors centrally and preferably publishes data on the extent of electronic payments	3	4	-
There is a law or binding regulation requiring transition to electronic for some or all of government	3	3	-
There are well documented credible examples of cost-benefit analysis – awareness of benefits	4	4	-
The payment instruments exist to service the main use cases defined by government	2	2	-
Service providers	2.0	2.0	4.0
Providers see value in providing this service through electronic payments	1	2	3
Providers can monetize the value of offering this service through electronic means	2	2	-
Providers are willing to make the necessary investments required to offer this service	1	3	4
Providers consider this service important and therefore market it appropriately	2	2	4
Non-financial businesses	2.0	3.0	4.0
The perceived advantages of shifting exceed disadvantages	2	2	3
There is no stigma attached to electronic channels as result of recent or major experience of loss	2	2	-
There are additional incentives offered to use electronic	4	3	-
Cash payments are restricted or else electronic payments required by law in defined circumstances	2	2	-
Cost of cash studies have been performed on categories of business payment and published	4	4	4
Consumers	3.0	3.0	4.0
There is no history of major scandal or disrepute associated with electronic payments in the past five years	2	2	3
There is no widespread distrust of financial institutions among the general public	2	3	3
There is a ubiquity of points at which cash can be exchanged for electronic value in an account and vice versa	3	4	4
Individuals consider the risk of electronic theft less or lower than risk of cash theft	3	3	3
Many people have electronic accounts through which they can conduct electronic payments	2	3	4
Overall	2.2	2.8	3.8

Annex E. Government policy relating to the interface of Cash-to-Electronic funds

The following table is an analysis of three desired outcomes necessary to make the Cash-to-Electronic Funds payment interface work well, namely to reduce attractiveness of cash for all participants, to increase POS ubiquity and to increase presence of cash-handling agents. The table illustrates how current policy Interventions are in general not aligned with the strategic intentions in these three areas.

CBN policy	Policy would indicate that	Observed strategies elsewhere to promote the ecosystem	Current CBN intervention	Rationale for intervention	Result of CBN current intervention
Cash-less — reduce the use of cash and increase electronic payment	Reduce the attractiveness of withdrawing cash from a branch or ATM Promote the use of EMV based debit card payments at merchant POS terminals	Make cash withdrawal at an ATM using a card expensive so that withdrawals are avoided and cards used instead to pay at merchants Set a band of cash withdrawal fees with a minimum > free to ensure access to cash has a price	Set cash withdrawal fee at all ATMs (on-us and not-on us) to zero, i.e., free cash dispensing	To make access to cash cheap for the poor	1. Access to cash is free. When faced with a decision whether to use cash versus card at POS given the reliability of POS cash is chosen. 2. The banks are forced to carry the full cost of cash provision to and operation of ATMs for their and all other banks' customers, thereby making ATM provision an unattractive business.
			Set cash card loading and unloading free		1. Access to cash off the card is free — so why use it in an unreliable POS? 2. Banks carry the full cost of the card's operation — so why launch it as it will run at a loss?
POS ubiquity	PTSPs and banks are encouraged to deploy large POS networks that are profitable	Merchant acquiring fee set on the higher side of acceptability	Set acquiring fee at 1.25%	Encourage merchants to use POS terminals	Merchants unwilling to pay the 1.25% as there is no market pressure for their customers to accept card as the customers can all access cash for free.
		Allowance of debit card fee per transaction to card users	Use of debit card free	Encourage customers to use their debit cards	Has encouraged card usage but only at ATMs to gain fee-free access to cash.

CBN policy	Policy would indicate that	Observed strategies elsewhere to promote the ecosystem	Current CBN intervention	Rationale for intervention	Result of CBN current intervention
Financial Inclusion through the ubiquitous availability of Mobile Money Cash-in and Cash-out Agents	Banks and MMOs are encouraged to roll out agents because it is a viable business and serves Nigerians in un- and underserved areas	Allow Banks and MMOs to charge fees that the market can bear and that are sufficient to fund the Agent business (Agent commission and income for the DMB/MMO)	Restrict maximum cash-in and cash-out fee to N100	Keep the price of using agents down	Reduced the viability of entering the agent business by DMBs and MMOs as fees can't be set at a level that funds agent commissions and the operation of the business.
			Set cash withdrawal fee at all ATMs (on-us and not-on us) to zero; i.e., free cash dispensing	To make access to cash cheap for the poor	When faced with free cash from an ATM or having to pay a withdrawal fee at an agent the customer will always choose the ATM unless there is not an ATM in economic reach. Agents will not get cash-out business where there are ATMs.
		Allow Banks and MMOs to operate exclusive agent networks so that there is value in investing in agents	Policy of non-exclusivity of agents	To stop dominance in the market To ensure agents service all banks and MMO's customers	<ol style="list-style-type: none"> 1. No Banks or MMOs see an investment rationale in building agent networks 2. No large-scale networks are being rolled out

Annex F. Payments System Infrastructure Participants' progress in supporting the shift to electronic payments

This annex adds further details supporting the trajectory ratings in Section V.

Payments System Vision 2020 working groups

With the release of the Payments System Vision 2020 in 2007, the CBN created 11 working groups comprising stakeholders from all sectors towards achieving a more robust and effective payments system. The working groups were categorized into the Infrastructure, Initiative and Special interest working groups to drive the implementation of the mandates.

Infrastructure for mass electronic credits

This use-case has had a high potential to impact the pace at which the country shifts to electronic payments. It includes disbursement by government and also by individuals and firms for salary payments. To date the federal government has moved all its payments to electronic (bar some exemptions).

Bulk EFT credit payment facilities are provided by most of the Deposit Money Banks (DMBs) as well as by NIBSS and private payment processors (eTranzact, Interswitch). Where the payments are not 'on-us' at the DMBs then they are usually switched through NIBSS and/or the private payment processors (eTranzact, Interswitch).

Current main players are:

- a. NIBSS Automated Bulk Clearing Service⁶¹ provides EFT services to corporate bodies and government agencies directly:
 - Process the payment of the salaries of Federal Civil Servants located all over Nigeria, into commercial banks and in other financial institutions (mortgage banks and micro-finance banks)
 - Payments of salaries and contractors for corporate entities, e.g., the Central Bank of Nigeria
 - A processing bureau provides electronic payments services to a number of payroll payment concentrator companies, companies and government entities
- b. Commercial payments processors
 - eTranzact
 - InterSwitch

Batch and real-time facilities

Most of the bulk EFT payments are done in batch mode both on-us at the financial institutions and off-us (which is switched through NEFT).

However, a growing trend in smaller businesses is to use to use real-time EFT for transfers both on-us at the banks and where the transfers are not-on-us through the NIP facilities offered by NIBSS. Some of the payment gateways provided by the commercial payments processors are also used such as InterSwitch's Quickteller.⁶² This makes Nigeria one of the few countries around the world offering Real Time Clearing of EFT payment transactions. The GPFP indicates that there are only 16 countries worldwide where RTC EFT is implemented.⁶³

TABLE F1 The working groups of relevance to a shift to a cashless retail environment

Working Group	Objective	Status September 2013
WG.1 Government Supplier Payments	To ensure all government supplier payments are made electronically by the end of 2010	NIBSS Electronic Fund Transfer (NEFT) ⁵⁹ fully operational All of Government payments are made electronically
WG.2 Person-to-Person	To create framework for trusted electronic person-to-person payments	18 Mobile Money Operators licensed NIBSS Instant Payment ⁶⁰ (NIP) implemented. 1.2 million transactions in June 2013 Commercial Payment Processors offering P2P services
WG.3 Salary Payments	To mandate all employers (more than five employees) to pay salaries electronically	Smaller companies using the NIP facility to pay B2B, B2P
WG.4 Consumer Bill Payments	To encourage the usage of electronic bill payment services	Commercial bill pay providers as well as banks provide bill pay facilities accessible from the Web
WG.5 Taxes	To encourage electronic payment of all forms of taxes (federal, state and local)	
IG.2 ACH and Checks	To maintain a best-practical check and ACH clearing infrastructure	
IG.3 Cards	To maintain a best-practical cards processing and settlement infrastructure	Establishing PTSPs

Annex G. References

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Annex H. Relevant regulations

Table H1 below lists the regulations cited in this report. Other CBN circulars are available at <http://www.cenbank.org/documents/bsdcirculars.asp>.

TABLE H1 Relevant regulations

Year	Title	Link
2013	FPR/DIR/GEN/CIR/03/002, 2013-03-27 Revised Guide to Bank Charges	http://www.cenbank.org/Out/2013/FPRD/Circular%20to%20all%20Banks%20and%20Discount%20Houses.%20The%20Rvised%20Guide%20to%20Bank%20Charges.pdf
2012	Revised Guidelines on Stored Value/Pre-Paid Card Issuance and Operations	http://www.cenbank.org/out/2012/ccd/circular%20iro%20stored%20value%20prepaid%20card%20issuance%20and%20operations.pdf
2011	Industry Policy on Retail Cash Collection and Lodgement	http://www.cenbank.org/OUT/2011/CIRCULARS/COD/RETAIL%20LODGEEMENT.PDF
2011	Guidelines on Point of Sale (POS) Card Acceptance Services	http://www.cenbank.org/cashless/POS_GUIDELINES_August2011_FINAL_FINAL%20(2).pdf
2010	Standards and Guidelines on Automated Teller Machine (ATM) Operations In Nigeria	http://www.cenbank.org/OUT/2010/CIRCULARS/BSPD/ATM%20STANDARDS%201.PDF
2009	BOD/DIR/CIR/GEN/01/106, Circular to All Deposit Money Banks: Maximum Limit on Check Payment	http://www.cenbank.org/OUT/2009/CIRCULARS/BOD/CIRCULAR%20ON%20MAXIMUM%20LIMIT%20ON%20CHECK%20PAYMENT0001.PDF
2009	BSD/DO/CIR/V1/01/24 Circular to All Banks and Other Financial Institutions: AML/CFT Compliance Manual	http://www.cenbank.org/OUT/CIRCULARS/BSD/2009/CIRCULAR.AML%20COMPLIANCE%20MANUAL.PDF
2009	Regulatory Framework for Mobile Payments Services in Nigeria	http://www.cenbank.org/OUT/CIRCULARS/BOD/2009/REGULATORY%20FRAMEWORK%20%20FOR%20MOBILE%20PAYMENTS%20SERVICES%20IN%20NIGERIA.PDF
2007	Central Bank of Nigeria Act	http://www.cenbank.org/OUT/PUBLICATIONS/BSD/2007/CBNACT.PDF
2003	Guidelines on Electronic Banking in Nigeria	http://www.cenbank.org/OUT/PUBLICATIONS/BSD/2003/E-BANKING.PDF

Annex I. Organizations and individuals interviewed

Organization	Individuals
Bureau of Public Procurement (BPP)	Emeka Ezech, Director General
Catholic Relief Services	Christopher Bessey, Country Representative for Nigeria
Central Bank of Nigeria (CBN)	Banking and Payment System Department Statistics Department: Dr. Sani Doguwa, Director, Statistics Department; Mrs. Adeleke; Mr. Yaaba
Cellulant	Judith Osiobe
CitiServe	Olakunle Aboaba, Business Development
Corporate Affairs Commission (CAC)	Mr Alhaji Bello Mahmud, Registrar General
Ecobank	Shorungbe Adeyinka James, Responsible, Ecobank Mobil
Etranzact	Valentine Obi, CEO; Sullivan Akala; Rotimi Adebajo
Federal Accounts Allocations Committee (FAAC) in MoF	Mr Nasiru Nabage
Federal Inland Revenue Service (FIRS)	Mr. Mustapha Sirajo, Tax Policy & Legislation Department
Federal Ministry of Labor and Productivity	Mr. Ajonye D.S., Policy Analysis and Research and Statistics Department
First Bank	Chuma Ezirim, CEO
Funds & Electronic Transfer Solutions (FETS)	Mr Dare Owolabi, MD of FETS, and chairman of AMPO (association of licensed mobile payment operators)
Interswitch	Mr. Mitchell Elegbe, CEO
Lagos Chamber of Commerce and Industry	Vincent Nwani, Director, Research and Advocacy
MasterCard	Omokehinde Ojomuyide, Vice President & Area Business Head, West Africa
McKinsey & Co	Loohini Moodley
National Association of Nigerian Traders (NANTS)	Ken Ukaoha Esq., President
National Bureau of Statistics (NBS)	Emuesiri Ojo, Special Adviser to the Statistician-General
National Pension Commission (PenCom)	Mr. Umaru Farouk Aminu, Head, Research and Corporate Strategy Department
National Planning Commission (NPC)	Mr. Bassey O. Akpanyung, Director International Cooperation Department
National Poverty Eradication Program (NAPEP)	Mr. Mukhtar Abubakar Tafawa Balewa, National Coordinator; Wakil Adamu, Director, Research, Monitoring and Evaluation; Angel Adellaja, SA; Amina Alhamdu, Technical Assistant
National Salaries, Incomes, and Wages Commission	Mr. Oduche Boniface Okafor, Ag. Director Finance and Accounts
NIBSS	Mrs. Christabel Onyejekwe, Business Development Director

Organization	Individuals
Nigerian Association of Chambers of Commerce, Industry, Mines and Agriculture (NACCIMA)	Mr. John Isemede, Director General
Nigerian Social Insurance Trust Fund (NSITF)	Mrs. Catherine Ogbizi-Ugbe, General Manager, ICT Department
Office of the Accountant General of the Federation (OAGF)	Mr Mohammed Dikwa, Director Funds
Office of the Head of Civil Service of the Federation (OHCSF)	ADC to Office of head of service
PAGATECH	Mr. Tayo Oviolu, CEO
Paymaster/ Chams	Demola Aladekomo, Managing Director
Small and Medium Enterprises Development Agency of Nigeria (SMEDAN)	Mr Monday Ewans, Deputy Director; Oguiche Agadah; Bimpe Fawale
Stanbic	Francis Nwoboshi
UBA	Mr. Mike Omoigui, Head, e-banking
Unified Payment Services	Mr. Agada Apochi, CEO
USAID	Skip Kissinger, Economic Growth & Environment Office
Visa	Ade Ashaye
World Health Organization (WHO)	Dr Rui Miguel Vaz, WHO Representative

Endnotes

- 1 G: Government. B: Business (non-financial private sector). P: Person (individuals). D: Development community partner. For further explanation of the payment grid, see Better Than Cash Alliance (2012), *The Journey Toward 'Cash Lite'*, available at <http://betterthancash.org/wp-content/uploads/2012/09/BetterThanCashAlliance-JourneyTowardCashLite.pdf>.
- 2 Value capping means that the maximum value of a check is now N10m; larger transactions must be routed electronically. See Central Bank of Nigeria (December 11, 2009), BOD/DIR/CIR/GEN/01/106, Circular to All Deposit Money Banks: Maximum Limit on Cheque Payment, available at <http://www.cenbank.org/OUT/2009/CIRCULARS/BOD/CIRCULAR%20ON%20MAXIMUM%20LIMIT%20ON%20CHEQUE%20PAYMENT0001.PDF>.
- 3 Central Bank of Nigeria (September 2013), *Payments System Vision 2020: Release 2.0*, p. 19.
- 4 *Payments System Vision 2020: Release 2.0*, p. 20.
- 5 Data provided by Visa.
- 6 ATM transactions are not included in this data.
- 7 This description comes from an interview with the OAFG. However, despite repeated requests, the OAGF did not provide data on payments made through GIFMIS.
- 8 VISA's 2011 Government E-Payment Ad option Ranking (GEAR) study, which reports that "No such system exists" for online procurement payments, was issued before the launch of GIFMIS and the Bureau of Public Procurement's online platform.
- 9 Prior to 2012 called the consolidated revenue fund. See http://www.nigerstate.gov.ng/epubl/Niger_constitution_1999.pdf, Section 80.
- 10 See http://www.gifmis.gov.ng/gif-mis/index.php?option=com_content&view=article&id=6&Itemid=6#2.
- 11 See Central Bank of Nigeria (March 27, 2013), FPR/DIR/GEN/CIR/03/002, 2013-03-27 Revised Guide to Bank Charges, item 9.9.3, available at <http://www.cenbank.org/Out/2013/FPRD/Circular%20to%20all%20Banks%20and%20Discount%20Houses.%20The%20Rvised%20Guide%20to%20Bank%20Charges.pdf>.
- 12 Ibid.
- 13 Definition of financial access: Banked: all adults who have access to or use a deposit money bank in addition to having/using a traditional banking product, including ATM card, credit card, savings account, current account, fixed deposit account, mortgage, overdraft, loan from a bank, or Islamic banking product; including indirect access; Formal other: all adults who have access to or use other formal institutions and financial products not supplied by deposit money banks, including Insurance companies, microfinance banks, pension schemes or shares. It also includes remittances (through formal channels); including indirect access; Informal only: all adults who do not have any banked or formal other products, but have access to or use only informal services and products. This includes savings clubs/pools, esusu, ajo, or moneylenders; as well as remittances (through informal channels such as via a transport service or recharge card); Financially excluded: adults not in the banked,

formal other or informal only categories, even though the person may be using or have access to any of the following: loan/gift from friends or family and loan from employers, as well as remittances via a friend/family member.

- 14 The urban/rural split was not available from the Access to Finance report for 2012 at the time of this report.
- 15 Global Findex.
- 16 The only credible numbers available for the total number of agents has been collected by the Gates Foundation GIS mapping initiative (www.fspmaps.com), which has conducted a nationwide census of known mobile money agents. It is important to note that numbers stated by MMOs are often overstated (i.e., agents can represent multiple MMOs); and there is no present way to remove overlap.
- 17 World Telecommunication/ICT Indicators Database, available at <http://www.itu.int/en/ITU/Statistics/Pages/publications/wtid.aspx>.
- 18 Ibid.
- 19 The federal character of Nigeria should be stressed. Not only does the availability of financial infrastructure vary widely between states; so, too does the quality and availability of payments data, becoming less reliable at lower levels of government. Further, the CBN requires banks to report geographic indicators of transactions on only some payment types as part of compliance reporting.
- 20 Via the Magnetic Ink Cartridge Recognition Technology (MICR).
- 21 Nigerian Inter-Bank Settlement System (NIBSS).
- 22 See Central Bank of Nigeria (March 19, 2009), BSD/DO/CIR/V1/01/24 Circular to All Banks and Other Financial Institutions: AML/CFT Compliance Manual, available at <http://www.cenbank.org/OUT/CIRCULARS/BS/2009/CIRCULAR.AML%20COMPLIANCE%20MANUAL.PDF>.
- 23 Central Bank of Nigeria (2011), Cashless Lagos Presentation to Stakeholders, available at http://www.cenbank.org/cashless/Cashless%20Lagos%20Presentation_November.pdf.
- 24 67% Cash Processing, 24% Cash in transit and 9% Vault management, Central Bank of Nigeria, Cashless Lagos Presentation to Stakeholders, 2011.
- 25 *Cashless Lagos Presentation to Stakeholders. Based on a compilation of actual data from the CBN and 17 banks in the FSI (data extrapolated for 24 Banks). Does not include bank cash infrastructure costs and employee costs attributable to cash logistics.*
- 26 See <http://www.centralbanking.com/central-banking/news/1419505/major-revolution-nigeria-bank-industry-begins>.
- 27 Central Bank of Nigeria (August 2003), Guidelines on Electronic Banking in Nigeria, available at <http://www.cenbank.org/OUT/PUBLICATIONS/BS/2003/E-BANKING.PDF>.
- 28 Section 47 (1) of the CBN Act provides that "It shall be the duty of the CBN to facilitate the clearing of cheques and credit instruments for banks carrying on business in Nigeria and for this purpose, the bank shall at any appropriate time and in conjunction with other banks establish clearing houses in premises provided by the Bank in such places as the Bank may consider necessary." Section 47 (2) provides that the Bank shall continue to promote and facilitate the development of efficient

- and effective systems for the settlement of transactions Section 17 provides that “The Bank shall have the sole right of issuing currency notes and coins throughout Nigeria.”
- 29 Federal Republic of Nigeria (2007), Central Bank of Nigeria Act, available at <http://www.cenbank.org/OUT/PUBLICATIONS/BSO/2007/CBNACT.PDF>.
 - 30 Now available online from www.cenbank.org.
 - 31 See <http://www.cbn.gov.ng/Paymentsystem/PSV2020.asp>.
 - 32 See <http://www.bis.org/press/p110310.htm>.
 - 33 Central Bank of Nigeria (April 2010), Standards and Guidelines on Automated Teller Machine (ATM) Operations In Nigeria, available at <http://www.cenbank.org/OUT/2010/CIRCULARS/BSO/ATM%20STANDARDS%201.PDF>.
 - 34 Central Bank of Nigeria (2011), Guidelines on Point of Sale (POS) Card Acceptance Services, available at [http://www.cenbank.org/cashless/POS_GUIDELINES_August2011_FINAL_FINAL%20\(2\).pdf](http://www.cenbank.org/cashless/POS_GUIDELINES_August2011_FINAL_FINAL%20(2).pdf).
 - 35 Central Bank of Nigeria (April 2011), Industry Policy on Retail Cash Collection and Lodgement, available at <http://www.cenbank.org/OUT/2011/CIRCULARS/COD/RETAIL%20LODGEEMENT.PDF>.
 - 36 “Viable” can be defined as services that are affordable, available, accessible, and reliable.
 - 37 Bankable Frontier Associates (2012), Review of Cashless Lagos Policy, commissioned by EFINA for CBN.
 - 38 *Payments System Vision 2020: Release 2.0, p.11*.
 - 39 Stakeholders include: FMARD, BOA and Cellulant, National Identity Management System, Bankers Committee Identity Management project, Cashless Economy, Financial Inclusion initiative, appropriate State Government initiatives and the Government electronic payments initiative.
 - 40 Regulatory Framework for Mobile Payments Services in Nigeria (June 11, 2009), available at <http://www.cenbank.org/OUT/CIRCULARS/BOD/2009/REGULATORY%20FRAMEWORK%20%20FOR%20MOBILE%20PAYMENTS%20SERVICES%20IN%20NIGERIA.PDF>; Guidelines on Point of Sale (POS) Card Acceptance Services; Revised Guidelines on Stored Value/Pre-Paid Card Issuance and Operations (October 10, 2012), available at <http://www.cenbank.org/out/2012/ccd/circular%20iro%20stored%20value%20prepaid%20card%20issuance%20and%20operations.pdf>; and Standards and Guidelines on Automated Teller Machine (ATM) Operations.
 - 41 See Patrick McGroarty and Drew Hinshaw (May 8, 2013), “MasterCard to Issue ID and Payment Cards in Nigeria,” The Wall Street Journal, available at <http://online.wsj.com/article/BT-CO-20130508-713308.html>.
 - 42 The chips will have 11 additional applications: eID, ePKI, Driver’s license, ICAO, Transport, Health, Voting, Pension, Tax, Insurance, and SIM. Updated information from 25 November 2013 interview with Omokehinde Ojomuyide, Vice President & Area Business Head, West Africa for MasterCard.
 - 43 The methodology used to calculate payer-payee relationships is presented in Annex B.
 - 44 Nominal (current) prices, World Bank. See Exchange rate after list of acronyms.
 - 45 This analysis does not include bilateral aid transfers in the D2G space, as the focus is on payments for which the sender is in the country, with the exception of international remittances. See Annex B for definitions.

- 46 Gates Foundation (2013), Fighting Poverty, Profitably: Special report Annex on Nigeria, available at <http://docs.gatesfoundation.org/Documents/Fighting%20Poverty%20Profitably%20Report%20Nigeria%20Appendix.pdf>.
- 47 MasterCard Advisors. (2013), Spotlight on Nigeria, available at http://www.mastercardadvisors.com/cashlessjourney/content/MasterCard_Advisors_Cashless_Journey_NGA.pdf.
- 48 Response from NIBSS and OAGF regarding this fee is still outstanding.
- 49 National Bureau of Statistics and the Small & Medium Enterprises Development Agency of Nigeria (2010), Survey Report on Micro, Small and Medium Enterprises (MSMEs) in Nigeria: Preliminary Report, available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CDcQFjAC&url=http%3A%2F%2Fwww.nigerianstat.gov.ng%2Fpages%2Fdownload%2F67&ei=2C9-UuDNCavlsAT62YDABg&usg=AFQjCNFOiX6YEFcYkAoCJd2GugFkv_VbZQ&sig2=5DEgElhsx8QGEO0JGr2-Xg&bvm=bv.56146854,d.cWc.
- 50 Code Line Clearing (CLC) enables same day processing and settlement of cheques deposited by customers where the cheques may or may not be drawn from the bank in which they are deposited. CLC creates electronic images of all paper and reduces physical handling requirements.
- 51 79% of MSMEs have banking relationships, though the figure is only 17% for owners of sole proprietorships. In dipstick interviews, traders with bank accounts gave these reasons for using cash.
- 52 Central Bank of Nigeria, Revised Guide to Bank Charges, items 10.6.1 and 10.6.2.
- 53 NIBSS data, August 2013.
- 54 There was no available data on development partners' payment for Nigeria.
- 55 J. Godoy et al (2012), *Payments and Money Transfer Behaviour of Sub-Saharan Africans*, Gallup and Bill & Melinda Gates Foundation.
- 56 R. Holmes & B. Akinrimisi (2012), *Social Protection in Nigeria: Mapping programmes and their effectiveness*, Overseas Development Institute.
- 57 Godoy.
- 58 Drawn from glossary in Brian Le Sar and David Porteous (2012), *Introduction to the National Payments System*, available at www.nps-institute.com.
- 59 See <http://www.nibss-plc.com/services/nibss-electronic-fund-transfer>.
- 60 See <http://www.nibss-plc.com/services/nibss-instant-payment>.
- 61 See <http://www.nibss-plc.com/services/automated-bulk-clearing-service>.
- 62 See <http://www.interswitchng.com/#QUICKTELLER>.
- 63 "What Will the Role of Bank Accounts Be as Payments Evolve?" Global Payments Forum Paper, available at <https://gpf.nacha.org/download/gpf-white-paper>, page 14.

About the Better Than Cash Alliance

The Better Than Cash Alliance is an alliance of governments, private sector, and development organizations committed to accelerating the shift from cash to electronic payments. The Better Than Cash Alliance is funded by the Bill & Melinda Gates Foundation, Citi, Ford Foundation, MasterCard, Omidyar Network, USAID, and Visa Inc. The UN Capital Development Fund serves as the secretariat.



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