



Payment Developments in Africa

The Payments Journey

Volume 2

November 2016

kpmg.com

Foreword

As Africa continues its growth trajectory and foreign investors – financial services organisations and others – seek new investment opportunities across the continent, Africa’s payment systems are becoming an increasingly important topic.

At KPMG, we are focussed on helping both private and public organisations respond to the transformation now underway across Africa’s payments landscape. That is why we have developed this series on payment developments in Africa. We believe that, by sharing our insights and knowledge, we can help drive Africa’s payments journey.

In our first edition of *Payment Developments in Africa*, we offered a forward-looking perspective on the payment challenges facing Africa’s markets. We also examined the ‘silent revolution’ now underway across Africa’s financial services sector and looked at how Africa’s Financial Technology (FinTech) companies are helping markets leapfrog the legacy challenges faced in other parts of the world.

In this edition, we take a closer look at many of these trends and discuss how they are impacting the payment sector. This report kicks off with a profiling of Ghana and Tanzania. We then go on to explore how the payment sector is evolving at a regional level with WAEMU (West African Economic Monetary Union). We then review latest FinTech trends, investment numbers and emerging technologies.

This report also includes our viewpoint on one of the biggest challenges facing Africa’s payment sector: financial inclusion. In ‘Bridging the Great Divide’, we explore the evolving role of digital innovators and regulators as markets move towards greater financial inclusion.

We believe this report provides financial institutions, regulators, investors and consumers with deep insight into current trends and challenges in Africa’s payments sector. With insights based on KPMG’s broad regional and local experience, extensive knowledge and understanding of payment reforms, strategy and innovation in Africa, we hope this edition of *Payment Developments in Africa* delivers new ideas and catalyses further change in Africa’s payment markets.

To learn more about the issues raised in this report – or to discuss the unique challenges facing your organisation – we encourage you to contact your local KPMG member firm or any of the contacts listed at the back of this publication.



Bisi Lamikanra
Partner & Head,
Financial Services Africa



Joleen Young
Associate Director,
Africa Payments Advisory



Contents

1	Executive Summary	2
2	Country Spotlight: Ghana	4
3	Country Spotlight: Tanzania	18
4	Regional Spotlight: WAEMU Drives Regional Payments Cooperation	32
5	Bridging the Great Divide	50
6	Latest Regulatory Developments in Payments for Nigeria, South Africa and Kenya	60

1



Executive Summary

* **Country spotlight: Ghana makes the shift from cash to digital**

While Ghana's payment system has seen significant improvements over the past decade, particularly in terms of payment infrastructure, the country remains largely a cash (and increasingly cheque) society. In this country spotlight, we explore the Central Bank initiatives, regulations and systems governing Ghana's payment environment and look at the evolving mobile, electronic and alternative payment markets.

* **Bridging the Great Divide**

As Africa's governments and Central Banks seek to improve financial inclusion and drive in-bound investment, new and exciting opportunities are emerging for both traditional banks and FinTech start-ups. In this feature we explore the latest investment trends, technologies and show how Fintechs are partnering with payment industry players to solve for access to payments networks and system. We also bring together some of the ideas shared in this report to explore the gaps and opportunities that must be faced in order for Africa's governments and regulators to finally bridge the great divide.

* **Country spotlight: Mobile drives massive change in Tanzania**

Despite significant gaps in the current regulatory regime governing payments, Tanzania boasts a safe, secure – and increasingly innovative – payment sector. While the country remains a largely cash-dominated economy, this spotlight report finds that Tanzania's Central Bank, policy makers and payment participants are eager to improve the efficiency, convenience and accessibility of payment systems.

* **Regulatory updates and developments: Kenya, Nigeria and South Africa**

In our first edition of Payment Developments in Africa, we explored the payment regulation in three key markets: Kenya, Nigeria and South Africa. In this chapter, we provide readers with an update on the latest regulatory, sector and market developments in these countries.

* **Regional spotlight: WAEMU drives regional payment coordination**

Over the past two decades, the Central Bank of West African States (BCEAO) has been rolling out a series of reforms aimed at modernising the West African Economic and Monetary Union's (WAEMU) payment systems, automating trading and settlement systems and developing an interbank card payment system. In this section, we take a look at the history of WAEMU, highlight key regulatory trends and discuss the regional payment systems in the region.

2



Country spotlight

Ghana

While Ghana's payment system has seen significant improvements over the past decade, particularly in terms of payment infrastructure, the country remains largely a cash (and increasingly cheque) society. In this country spotlight, we explore the Central Bank initiatives, regulations and systems governing Ghana's payment environment and look at the evolving mobile, electronic and alternative payment markets.

Overview: Cheques and balances in Ghana's payment system

Ghana's payment system has improved significantly over the past decade and continues to evolve to meet the developmental needs of the country. The system has undergone significant change, influenced by not only global trends in payment system development, but also by changing economic, financial and public policy objectives, and an emerging and growing local ICT industry.

The development of Ghana's payment system has been driven by seven key objectives:

- To prevent and/or contain risks in payment, clearing and settlement systems
- To establish a robust oversight and regulatory regime for payment and settlement systems
- To bring efficiency to the fiscal operations of the Ghana Government
- To deepen financial intermediation
- To discourage the use of cash for transactions whilst encouraging the use of paper-based instruments for payments as part of the short-term development plan
- To promote financial inclusion without risking the safety and soundness of the banking system
- To develop an integrated electronic payment infrastructure that will enhance interoperability of payment and securities infrastructures.

Overall, Ghana's payment landscape has been positively influenced by improvements in national economic infrastructure such as the availability of GSM technology, increased internet penetration and the rising deployment of ATMs over the past decade.

In 2002, the Ghana Interbank Settlement system was launched, a real-time gross settlement system designed to link the head offices of banks to the Central Bank (the Bank of Ghana) to enable real-time gross electronic payments among banks.

To help migrate Ghana towards broader use of electronic payments, the Bank of Ghana (BoG) established Ghana Interbank Payment and Settlement Systems Limited (GhIPSS) to own and operate e-payments schemes and infrastructure within the country. GhIPSS, which is ISO 27001 certified, has implemented and now operates the National Switch and the Biometric Smart Card Payment System, e-zwich and the Cheque Code-line Clearing (CCC) and Automated Clearing House (GACH) systems.

Despite these efforts and strengthening infrastructure baseline, Ghana remains a largely cash and cheque society. Indeed, whereas global trends seem to lead towards an overall reduction in the use of cheques, statistics from the BoG show a steady increase in cheque usage in the country – from approximately GHS38.5 billion (USD 7.4 Billion) in value in 2010 to GHS131.1 billion (USD 29.76 billion) in 2015, a 240 percent increase over five years.

Other payment systems continue to see increased adoption. The Ghana Interbank Settlement system continues to be the preferred method for conducting high value transactions and more than GHS1 trillion in gross value was transacted through the system in 2015, compared to just GHS131.2 billion in cheques in the same period. Volumes, however, tell a different story: almost 10 times as many cheques as RTGS (Real Time Gross Settlement) transactions were cleared in 2015 (total volume for the RTGS was just 794,282 compared to 7,146,259 cheques cleared).

Transaction Value (GHS Million) Source: Bank of Ghana					
YEAR	ACH (Credit)	e-zwich	Cards	Mobile Money	ACH (Debit)
2010	-	84.50	-	-	-
2011	1,302.60	176.20	-	-	-
2012	3,690.04	217.80	1.10	594.12	-
2013	6,332.71	217.20	67.50	2,652.47	22.81
2014	10,815.21	272.67	183.32	12,123.89	31.48
2015	15,075.07	922.90	305.14	35,444.38	70.91

Source; Bank of Ghana: Banking and Payments Statistics Report 2015

Mobile payments have also been gaining popularity since 2012. In fact, between 2012 and 2015, total transaction volume for mobile payments grew by an amazing 5,866 percent. This is largely driven by recent collaborative efforts between banks and telecommunications operators to reach the unbanked sections of society which current account for around 70 percent of Ghana's total population. Ghana also boasts more mobile phones than people, with an estimated 36.5 million mobile phone subscribers for a total population of around 27 million.

E-money initiatives also saw a significant transaction value increases over the year 2015, with the value of all e-money transactions (ACH-credit, e-zwich, cards, mobile money and ACH-debit) reaching GHS51.8 billion.



Key developments:

Ghana's payment environment

Launch of the National Payment System (NPS) Strategy: The BoG's NPS strategy was launched in August 2014 to help guide the development of the payment system in Ghana. The paper offers a roadmap to help accelerate the shift from a cash-dominant to a 'cash-lite' economy. Among its recommendations, the NPS calls for the creation of a Payments Council, an effective penalty regime, improved payment pricing transparency for consumers and a strengthening of the relationship between the BoG and the country's telecommunications companies.

Release of e-Money Issuer and Agent Guidelines: As part of its broader strategy to create a regulatory environment that enables convenient, efficient and safe non-cash retail payment and funds transfer mechanisms, the BoG recently published its e-Money Issuer and Agent Guidelines. The Guidelines ensure that e-money services are provided only by regulated financial institutions and duly licensed non-bank entities engaged solely in regulated and supervised e-money and related activities. The aim of the Guidelines is to promote financial inclusion by extending financial services beyond traditional branch-based channels.

Ongoing Development of New Interconnect Clearing House: While there are four telcos currently offering mobile money services in Ghana, they are currently unable to link their respective platforms, creating significant friction for customers trying to send money between networks and platforms. Recognising these challenges, the national regulator (the National Communication Authority) is in the process of developing and deploying an Interconnected Clearing House (ICH) that will create a common platform that allows telcos to link to the Ghana Interbank Payment and Settlements System (GhIPSS) switches.

Ghana E-Payment Portal (GEPP) launched: The Government of Ghana (GoG) recently deployed a pilot phase of its new E-Payment Portal. Designed to facilitate the payment of GoG services by individuals and corporations, the portal is being developed under the leadership of the National Information Technology Agency (NITA) of the Ministry of Communications as part of the World Bank funded e-Ghana Project.

Promotion of e-zwich Card use by Government: The GoG has undertaken an initiative to gradually move all public sector workers to payment via the biometric e-zwich card platform. The platform is already being used by National Service personnel and GhIPSS is now deploying POS devices at shops, filling stations and supermarkets grow the market and help drive the transformation of Ghana towards a 'cash-lite' economy.

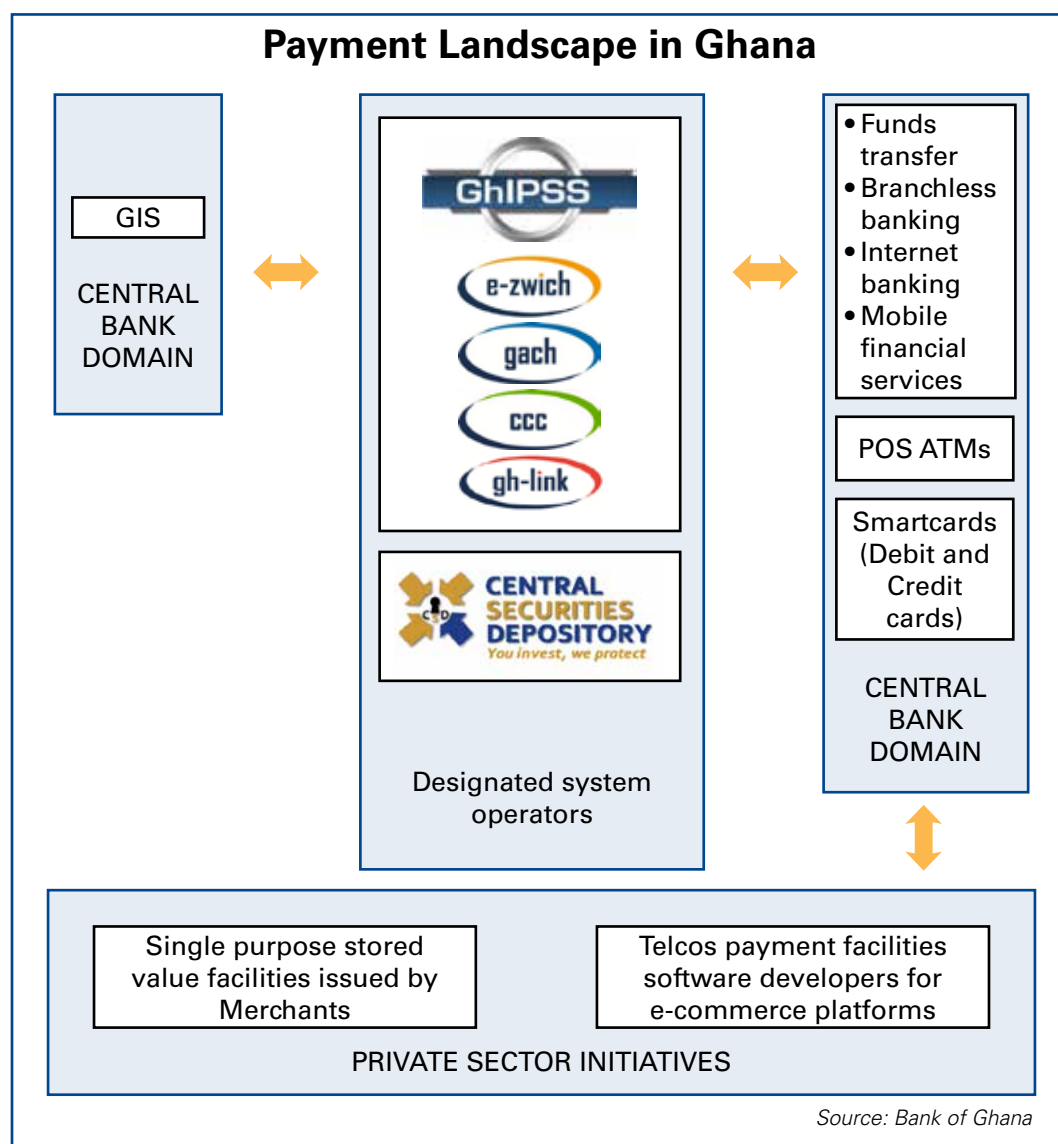
Introduction of First Tap and Pay Cards: Airtel Ghana has rolled out Ghana's first Tap and Pay card system through their Airtel Money solution, allowing contactless payment based on the Near Field Communications (NFC) technology which enables mobile devices to securely communicate with a payment terminal.



A closer look: Ghana's payment landscape

Ghana's national payment system is made up of several key elements:

- **Payment instruments:** cash, cheques, payment cards, mobile money and other forms of electronic funds transfer
- **Infrastructure:** telecommunication network arrangements, ATMs, POS, switches, servers, computers, etc. for transacting and clearing payment instruments
- **Participating institutions:** banks and non-bank financial institutions, payment processing and switching companies, telecommunication companies, settlement institutions, cheque printing companies, etc.
- **Channels:** real-time gross settlement for wholesale payment and settlements, cheque code-line clearing and automated clearing house, national switch, small value transaction systems such as ATM/POS cards, debit cards, smart cards, etc., and internet and mobile banking
- **Governance and oversight:** market conventions and regulations, as well as legal and regulatory frameworks.



Regulatory framework: Maintaining a sound and efficient banking system

Ghana's payment regulations and legal frameworks aim to achieve a sound and efficient banking system that operates in the interest of depositors, customers and the economy as a whole. The system is founded on a number of laws and regulations, in line with the 24 Principles for Financial Market Infrastructures.

The main laws covering payment instruments, institutions, clearing and settlement systems in Ghana include:

- **Bank of Ghana Act (2002), Act 612:** The Act names the BoG as the authority responsible for payment and settlement systems in Ghana. It notes that the functions of the BoG should include the promotion, regulation and supervision of payment and settlement systems and the facilitation of the clearing of cheques and other credit instruments for banking institutions.
- **The Payment Systems Act (2003), Act 662:** This law further empowers the BoG to oversee and manage the payment systems. It also provides for a number of other requirements such as principles of transparency, minimum obligations of participating institutions, principles guiding the irrevocability and finality of payment, the admissibility of electronic evidence in the court of law, dispute resolution and other provisions covering disputes, offences, penalties and interpretations.
- **The Electronic Transaction Act (2008), Act 772:** This law enables businesses and individuals to use electronic communications in the course of satisfying their legal obligations as well as facilitating a safer and easier way to do business online.
- **Foreign Exchange Act (2006), Act 723:** This Act details the legal provisions for the exchange of foreign currency for international payment transactions and foreign exchange transfers as well as to regulate foreign exchange business and other related matters.
- **The Bills of Exchange Act (1961), Act 55:** Based on the English Bills of Exchange Act 1882 which specifies how cheques are drawn, accepted and paid. This bill is currently in the process of being reviewed to reflect current trends.

Other laws including:

- Credit Reporting Act (2007), Act 726
- Central Securities Depository Act (2007), Act 733
- Anti-Money Laundering Act (2008), Act 749



< 2001	2002	2003	2004 - 2008
Exchange Act, Act 55: This is an adaptation of the English Bills of Exchange Act 1882 which specifies how cheques are drawn, accepted and paid.	Act 612: The Act makes the Bank of Ghana the authority responsible for payment and settlement systems in Ghana. 2002 – the Real Time Gross Settlement (Ghana Interbank Settlement) for wholesale payment and settlements was introduced (Rules and Guidelines).	Systems Act, Act 662: This is a sound legislative framework which further empowers the Bank of Ghana to oversee and manage the payment systems.	<ul style="list-style-type: none"> – 2006: Foreign Exchange Act, Act 723 – 2007: Credit Reporting Act, Act 726 – 2007: Central Securities Depository Act, Act 733 – 2008: Anti-Money Laundering Act, Act 749 – 2008: Electronic Transactions Act, Act 772
2009 - 2010	2012	2013 - 2014	2015 - 2016
<ul style="list-style-type: none"> – 2009: Cheque Codeline Clearing System for the electronic clearing of cheques and other paper payment instruments introduced (Rules and Guidelines). – 2010: Automated Clearing House for automated direct credit and direct debit payments launched (Rules and Guidelines). 	<ul style="list-style-type: none"> – 2012: Operationalization of gh-link-the national interbank ATM transaction switch (Rules and Guidelines). 	<ul style="list-style-type: none"> – 2013: National Payments Systems Oversight Framework document prepared by Bank of Ghana. – 2014: Strategic Payments Roadmap for Ghana, document prepared by Standard Chartered Ghana under the auspices of Bank of Ghana. 	<ul style="list-style-type: none"> – 2015: Guidelines for e-Money Issuer and Agent Guidelines to regulate and guide mobile money business activities in Ghana. – 2016: Introduction of GHIPSS Instant Pay (GIP) (Rules and Guidelines).

In addition to these laws, Ghana's payment system is supported by a number of rules, regulations and guidelines that govern specific systems. These include the Ghana Bankers' Clearing House Rules, the Ghana Automated Clearing House Direct Credit and Debits Guidelines and Operational Procedures, Guidelines for e-Money Issuers and Agents in Ghana, and Cheque Code-line Clearing with Cheque Truncation Guidelines and Operating Procedures.

The Ghana Interbank Settlement (GIS) System maintains Terms and Conditions that provide the contractual basis for the operation of large value funds transfer systems.

Together, these rules and regulations provide a clear operational framework within which clearing and settlement can be handled safely and efficiently. The rules cover key areas such as:

- payment instrument standards and security features
- processing procedures at the collecting bank
- processing at the clearing house gateway
- processing at bank's in-house clearing systems
- management of the clearing house
- membership
- sanctions and settlement of disputes.



A closer look: Ghana's payment systems and operators

Ghana's payment market includes a range of clearing systems and a real-time gross settlement (RTGS) system.

Ghana's RTGS system became fully operational in 2002 to provide domestic interbank fund transfers in compliance with BIS core principles for payment systems. Settlement within the RTGS system is final, irrevocable and unconditional.

Participation in the RTGS system is limited to licenced clearing banks operating in Ghana. At the end of 2015, there were 32 participants in the system, made up of 28 universal banks, the ARB Apex Bank and the Bank of Ghana, as well as two non-bank institutions: the national pension funds manager and the Central Securities Depository (CSD). Participants are able to operate their accounts in real-time via a computerised network system.

Ghana's RTGS system also manages net settlement of batches of multilateral retail payments (including cheque clearing, ACH, ATM, e-zwich, and mobile money) emanating from the Ghana Interbank Payment and Settlement System (GhIPSS), as well as the settlement of the cash leg of the security market from the CSD through an interface to achieve Delivery versus Payment (DVP).

The RTGS uses SWIFT messaging standards (thereby connecting all participants to the SWIFT network) and routing of payment messages is based on the FIN Y-Copy.

Ghana's payment system consists of four main clearing systems:

Ghana Automated Clearing House (GACH) Direct Credits & Debits System: GACH was established in 2009 to enable the electronic transfer of funds through direct credits and debits between financial institutions on behalf of their customers. By replacing the manual system that had been in place since 2004, the GACH increased the variety of payment options and significantly increased the speed of payment processing. GACH credit and debit transfers are implemented in two clearing cycles: same day settlement for transactions received before clearing sessions (Express Transactions) and next day settlement for transactions received after clearing cycle (Non-Express).

Cheque Code-line Clearing (CCC) with Cheque Truncation: This system enables the clearing of cheques electronically. Following the system's nation-wide introduction, cheque clearing cycles have been reduced to "D+1" (where "D" represents the day the cheque is deposited at a bank). Banks and savings and loans companies are required to credit depositors within three days (D+2). There are also express clearing sessions to enable the clearing and settlement of cheques on the day of deposit.

Gh-link System: Gh-link is the National Switch, an interbank switching and settlement system installed in 2012 to enable banks and other financial institutions to share each other's Automated Teller Machines (ATMs) and Point of Sales terminals (POS). The gh-link interconnects the switches of financial institutions and the systems of third party institutions to create an effective, efficient and common platform for interbank transactions. Gh-link has greatly improved interoperability for ATM and POS devices in Ghana and for local/proprietary cards including the e-zwich biometric smartcards.

Delivery vs. Payment (DVP) Clearing System: By stipulating that cash payment be made simultaneously with the delivery of a security, the DVP system has brought valuable benefits to the Central Securities Depository (CSD). The system allows for a significant reduction in the errors and delays associated with paper-based manual processing and, as a result, has improved efficiency in clearing and settlements in the securities market. Market liquidity has also improved due to the faster transfers and registration supported by DVP. Investors can use their securities accounts in the same way as paper certificates as collateral for loans.



Fintechs are shaping Ghana's payment systems

While Ghana's traditional banks play an important role in the country's payment systems, new developments over the past few years have led to the introduction of new payment service providers, particularly telecommunications firms offering mobile money transfer platforms and financial technology (FinTech) companies.

Mobile Network Operators active in Ghana's mobile money sector include MTN Money, Vodafone Cash, Airtel Money and TiGO Cash. MTN is currently the leading provider of converged communications solutions in Ghana with market share of around 48 percent. More than 12 million Ghanaians use MTN for mobile phone services, broadband internet and mobile money transfer services.

The role played by FinTech companies in the development of Ghana's payments industry cannot be overstated. Dominated by start-ups, these companies are rapidly changing the way money and financial services are handled by both individuals and corporates. From the simple payment gateway that allows customers to buy mobile phone airtime from their bank account through to apps that help customers send and receive remittances to their mobile wallets, these companies are having a massive impact on Ghana's payment sector.

Some of the current FinTech leaders in Ghana's payment system include:

MPower: Targeted to both consumers and businesses, MPower allows users to simply load money from their preferred electronic wallet or bank account to a registered MPower account. Users are able to use their balance to make purchases at any shop or merchant accepting MPower, or send to anyone with a bank account or mobile money account. Consumers are also able to buy mobile phone airtime as well as pay for regular bills. MPower supports all popular payment forms including bank debit cards, credit cards, mobile money and internet banking/direct deposit.

expressPay: expressPay is both a leading payment gateway provider as well as an ecommerce market place. As a market place, expressPay gives consumers real-time access to services such as airtime for all the major Telcos, Surfline internet, Vodafone broadband, DSTv, GOtv, as well as payment services for schools and hotels. As a payment gateway provider, expressPay is an official Visa Payment Technology Provider (PTP) and the leading Visa eCommerce processor in Ghana. expressPay supports mobile money payments and all major international card networks. It also meets all the international security standards and is PCI DSS certified.

Slydepay: Slydepay is a digital payment service that allows millions of Ghanaian consumers, merchants and businesses to pay and receive money for goods and services. The platform also allows consumers to transfer money to other Slydepay users digitally at no charge. Consumers are able to top up their accounts using their VISA cards, Airtel Money, First Capital Plus Speedbanking vouchers, MTN Mobile Money and Tigo Cash.

Zeepay: The latest player to enter Ghana's payment space, Zeepay focuses on facilitating the processing of multiple mobile phone payment transactions. Zeepay operates as an aggregator, integrating all types of payment platforms, banks, merchants, Mobile Network Operators (MNOs), and other companies with subscriber based transactions, into one single platform. The platform accepts mobile money wallets, debit and loyalty cards, as well as cash at the point of sale, and operates as a store house for holding cash through mobile wallets for members. At the end of 2015, the company made news when it partnered with Small World FS to bring remittances into mobile money wallets directly, thereby enabling emigrants to send money directly to a Mobile Money Wallet, simply by inputting the recipient's Mobile Money number.

Ghana's Government is also exploring options to use its payments to drive further change in the payment sector. The Government recently deployed a new online platform (the Ghana E-Payment Portal or GEPP) that enables payment of government services by individuals and corporate entities conducting business with the Government of Ghana.

Ultimately, the hope is that the e-Payment portal will help broaden the scope of payment options, streamline payment processes and improve efficiency specifically relating to payments and generally in the service provisioning for all Government Departments (MDAs) that deliver services to the general public in Ghana. The payment platform is designed to accept a range of payment types including international and local debit/credit cards, cheques, cash & vouchers, mobile payments, bank transfers and other payment methods such as Paypal.

GEPP is currently being deployed on a pilot phase under the leadership of the National Information Technology Agency (NITA) of the Ministry of Communications as part of the World Bank funded e-Ghana Project.

Towards e-Money: The movement from physical to electronic payments

Prior to the introduction of the RTGS in 2002, physical cash was the main mode of payments in the country. However, with the mandate to transform Ghana into a 'cash-lite' country, GhIPSS (under the auspices of the BoG) has developed a range of payment systems and methods that have led to an overall reduction in cash transactions.

As noted earlier, cheques are still the most popular non-cash form of payment, with about GHS131.1 billion worth of cheques cleared in 2015. The use of cheques had been depressed due to long settlement times outside the regional capital and concerns regarding fraud (some were using cheques as a ploy to delay or even evade payments). However, activity greatly increased when the BoG stepped up its enforcement of the regulation on dud cheques and introduced the Cheque Code-line Clearing system.

The electronic clearing of cheques has eliminated the undue delay in clearing of cheques in the system. According to GhIPSS, the number of cheques cleared through the express window grew by 79.26 percent in the first half of 2016 as compared to the same period in 2015. The value of cheques cleared also experienced significant growth (62 percent) according to a publication by GhIPSS. This suggests that the general banking public are becoming increasingly aware of their cheque clearing options.

As dependence on cash subsides, a number of electronic payment infrastructure and channels are gaining adoption. These include:

Automated Teller Machines (ATMs) and gh-link: ATMs have been the most successful consumer banking delivery channel and this has only increased with the introduction of gh-link in 2012. The system enabled local ATM cards to be used in virtually any ATM in Ghana which significantly increased interoperability amongst financial institutions in the country. Gh-link connects more than 2,000 ATMs in Ghana, making it the biggest and most convenient platform in Ghana.

Debit cards: Use of pin-based debit cards that enable cardholders to make payments or withdraw cash from their deposit accounts at ATMs and POS terminals seems to be growing in Ghana. Both international (Visa, MasterCard) and local proprietary cards are available in the country. Gradually, most banks in the country are migrating towards the adoption of global standardisation of electronic financial transactions through the adoption of the EMV standard.

Credit cards: Many commercial banks in Ghana issue credit cards on international payment schemes such as Visa, American Express and MasterCard. International credit cards are accepted by the ATMs of participating banks for cash withdrawals. These cards are also accepted by some retail outlets such as hotels, supermarkets and restaurants for the payment of goods and services at designated POS terminals.



GhIPSS Instant Payment System (GIP): The GIP is a service on the gh-link platform that allows payments to be sent electronically between accounts at different financial institutions as a single immediate payment. GIP can be accessed from channels such as internet banking, mobile, ATM, POS or the branch system. The system, which went live in June 2016, provides a platform that is available 24-hours a day and ensures that payments are processed based on account numbers. The system can only be used for payments made in Ghana in Ghana Cedi.

Point of sale (POS): While POS terminals are deployed across Ghana and allow customers to purchase goods or services using their cards as well as withdraw cash at the merchant's till, the system has seen poor adoption. Currently, only a few merchants in key regional capitals offer POS payments. However, demand for POS terminals is growing from banks (who own the devices) which has led GhIPSS to introduce gh-link Hybrid POS devices that accept local ATM cards, e-zwich cards as well as Visa or MasterCard (depending on the issuing bank).

Other Stored Value Cards: Prepaid debit cards and other stored value cards have been available in Ghana for some time. Both the closed loop and open looped cards are available, with a number of international brands such as Visa available for use globally. The cards are not linked to any bank account.

e-zwich: e-zwich is a national biometric switch and smartcard payment system implemented by all banks in Ghana in 2008. The system enables accessibility to banking and retail services and allows cardholders to perform banking and retail transactions at the outlets of other e-zwich financial institutions as well as e-zwich POS and ATM terminals. The e-zwich system offers deposit taking financial institutions (i.e. universal banks, rural banks, and savings and loans) a platform that enables them to interoperate. Importantly, the e-zwich POS supports both online and offline transactions which means that services can be accessed in all parts of the country regardless of the communications network. e-zwich cardholders benefit from the highest security standards through the biometric (fingerprint) client authentication system.

Electronic Funds Transfer and Cross Border

Payments: All banks operating in Ghana are connected to the SWIFT network and use SWIFT FIN messaging to transmit payment instructions to their corresponding banks and other counterparties in respect of international transfers. Most bank and non-bank financial institutions provide inward remittance services for the public using proprietary and global mechanisms such as Western Union and MoneyGram. However, mobile phone services are increasingly being used to send and receive remittances internationally.

Mobile banking and payments: Accelerating the shift

As mobile phone penetration rises across Ghana, many increasingly believe that a smarter approach to reducing cash dependency would be through encouraging the increased use of mobile phones for payments.

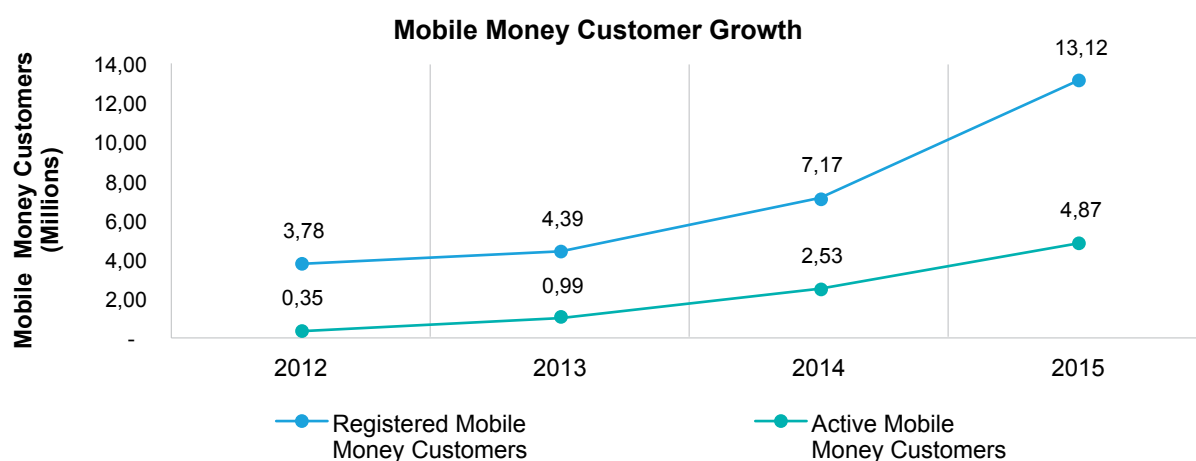
Mobile plays a central role in the BoG's National Payments strategy to create a 'cash-lite' society. The BoG intends to focus on several key initiatives such as improving the relationship between themselves and the national telecommunications agency, segregating financial and non-financial transactions (to provide consumers with a clear division between mobile money and traditional telco billing) and the passing of legislation to guide and regulate mobile money business activities. For example, the BoG recently issued Guidelines for e-Money Issuers and Agents.

Ghana obtained its first GSM licence in 1995 and, as of May 2016, there were an estimated 36.5 million mobile phone subscribers. Since the launch of mobile money in the early 2000s, mobile payments have been gaining strength. Indeed, between 2012 and 2015, the value of mobile payments in Ghana skyrocketed by 5,866 percent. Volume has also grown significantly – from around 40.8 million transactions in 2013 to more than 266 million transactions in 2015. As noted earlier in this spotlight on Ghana, this is largely due to significant efforts on the part of the banks and telcos to target the country's unbanked which currently make up around 70 percent of Ghana's total population.

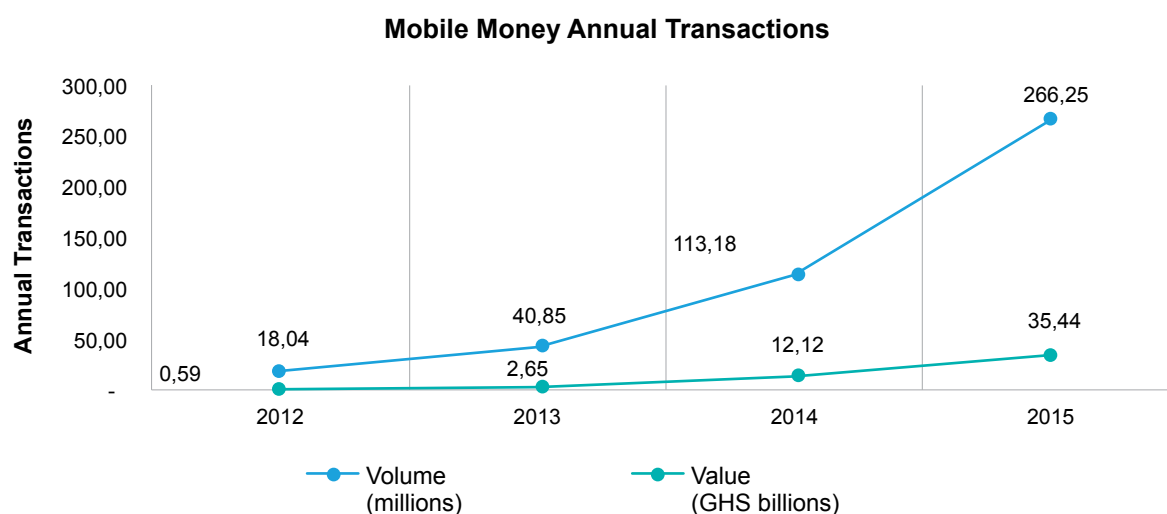


The BoG notes that, as of December 2015, there were four mobile money operators and 79,747 licenced agents, of which 56,270 were active. And while Ghana has an estimated 13.1 mobile money subscribers, BoG statistics suggest just 4.9 million were active at the end of 2015. Given Ghana's total population is estimated at 27 million, this suggests that mobile money has achieved around 20 percent penetration in the country.

Several factors may be limiting wider adoption including a lack of awareness about interoperability, mobile network problems, high barriers to customer entry and concerns regarding security. Currently, the top uses for mobile money are airtime purchases and sending and receiving money, indicating significant room for more sophisticated payment uses.



Source: Bank of Ghana Banking and Payments Statistics Report 2015



Source: Bank of Ghana Banking and Payments Statistics Report 2015



Looking ahead: Key challenges facing Ghana's payment systems

Likely the greatest barrier to the BoG's desire to shift the country towards a 'cash-lite' economy is the continued high cost of electronic transactions. Indeed, at a recent session hosted by KPMG at the 2016 Ghana Economic Forum (GEF), it was noted that customers are unhappy about the cost of electronic payment transactions when compared against other African markets. They may have good reason to complain: an instant interbank transfer of GHS1,600 costs around USD5 at Ghana's banks but just USD1 at Nigeria's banks.

In part, this is because Ghana's banks are at liberty to fix their own prices for services. This has led to both high prices and general confusion among consumers in the market who are faced with a complex array of products, services and prices.

The BoG may need to examine the experience of other African markets where the cost of payments is standardised to encourage customer adoption and financial inclusion. In South Africa, for example, the Reserve Bank recently embarked on a project to review the cost components of payment services that resulted in fixed charges for all banks.

Consumer adoption of mobile money solutions is also being hampered by the lack of interest-earning solutions from mobile wallet providers. Currently, customers do not earn interest on the balance on their wallet. However, the BoG is now taking serious steps to try to ensure that customers receive fair interest payments from the telcos which, in turn, should help drive use and adoption across the country.

Improved infrastructure and delivery channels will also be required to drive adoption of electronic money and payments in Ghana. Indeed, while ATMs are fairly common, particularly in key cities, it is rare to find a POS device at a merchant. Even where they have been deployed, they are often out of service due to challenges with the telecommunication infrastructure. As a result, most debit card-holding customers tend to limit their use to withdrawing cash. Clearly, the rollout of POS devices will need to be accelerated.

However, it must be noted that statistics on payments in Ghana are somewhat weak and generally insufficient to create valuable insights about the payment systems or to identify areas for development and growth. For example, there are no tabulations of the total number of POS devices in Ghana and no readily-available data on their use.

Improving interoperability between mobile money players will also help drive adoption. Today, only around 37 percent of registered mobile money customers are active and many complain about the inability to perform mobile money transactions between different networks. The introduction of the Interconnect Clearing House will improve the situation significantly, but more will need to be done to improve integration and interoperability amongst the different providers.

At the same time, the GoG and the BoG will need to focus on improving the enforcement of regulation and improving collaboration between government and industry. For instance, the BoG has issued a number of directives related to payments and e-money issuers, yet most industry observers believe that a lack of enforcement is reducing the impact of these new rules.

Some stakeholders suggest that compliance would increase with improved collaboration and dialogue between the regulator and payment providers. Increased levels of consultation prior to the introduction of new regulations would certainly increase 'buy in' from stakeholders and consumers. Public education will also be key to driving consumer awareness.

There is also a need for operators to implement relevant security certifications such as ISO 27001 and PCI DSS. The BoG has taken a step in the right direction with the requirement for e-money operators to comply with these standards but more needs to be done to encourage the implementation of these standards.

We believe that payments must become a top GoG agenda item. Today, payment initiatives are largely driven by GhIPSS and other private organisations. The BoG has also taken significant steps to elevate payments, raising payments from a 'Unit' designation within the BoG to a full-fledged 'Department'. But efforts will step up considerably in order to accelerate adoption nation-wide.

In Nigeria, for example, a Presidential mandate was issued for the adoption of e-Payments across the Federal Government and country has seen rising deployment of POS devices under the Cashless Nigeria Project.

3



Country spotlight

Tanzania

Despite significant gaps in the current regulatory regime governing payments, Tanzania boasts a safe, secure – and increasingly innovative – payments sector. While the country remains a largely cash-dominated economy, this spotlight report finds that Tanzania's Central Bank, policy makers and payment participants are eager to improve the efficiency, convenience and accessibility of payment systems.

Overview: Modernisation and mobility in Tanzania's payment system

While cash still dominates Tanzania's economy, a drive for payment system modernization, coupled with keen innovation in the FinTech and mobile sectors, is creating significant change within the market.

Against a backdrop of a modernisation initiative, the Government of Tanzania is currently implementing a new national payment system guided by the Tanzania Payment System Vision and Strategic Framework which was published in 2000.

A number of important milestones have already been achieved. In 2002, a new Electronic Clearing House (BOTECH) system went live, providing an interbank electronic debit clearing system. Around 80 percent of the interbank clearing volume is now processed electronically at the Dar es Salaam Clearing House while the remainder continue to be processed manually in the up-country clearing centres. The Electronic Fund Transfer (EFT) system went live in mid- 2004 to facilitate credit clearing of bulk transfer interbank payments.

With the vision of creating a more robust regulatory framework to support the national payment system, the Government of Tanzania amended the Bank of Tanzania Act (1995) with the Financial Laws (Miscellaneous Amendment) Act (2003). The Act aims to establish a payment system that is capable of creating and supporting a conducive environment for the operations and regulation of payment systems.

To improve settlement time for payments, the Tanzania Interbank Settlement System (TISS) was established in 2004, providing final and irrevocable interbank fund transfers in real-time or by means of a deferred option. TISS complies with the 14 Principles for Payment Systems Modernisation, as well as the 2012 BIS (Bank of International Settlements) Policy on Financial Market infrastructures.

While Tanzania's payment system has been slowly evolving, significant shifts have occurred in the use of electronic money and mobile payments. In part, this is being driven by the banks who are gradually introducing electronic payment instruments (such as credit and debit cards) and channels. ATMs and POS networks are also being deployed by the commercial banks.

However, progress towards electronic and mobile money services is currently hampered by a lack of a national card switch, an issue now being addressed at a national level.

With some statistics suggesting that more than half of the country's mobile phone subscribers now use mobile money and internet banking, the government plans to table a law to oversee this rapidly evolving area.

Indeed, adoption of electronic payment systems (particularly mobile payment systems) has grown significantly over time and is being driven by wider outreach on the part of the country's financial services organisations to unbanked populations in both rural and urban areas of the country.

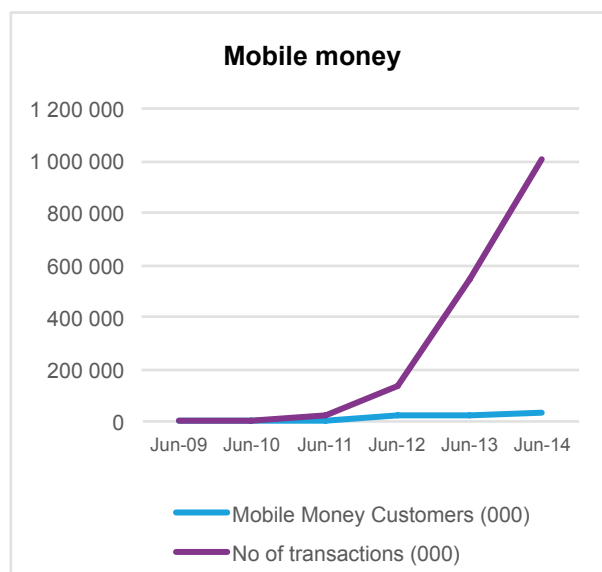
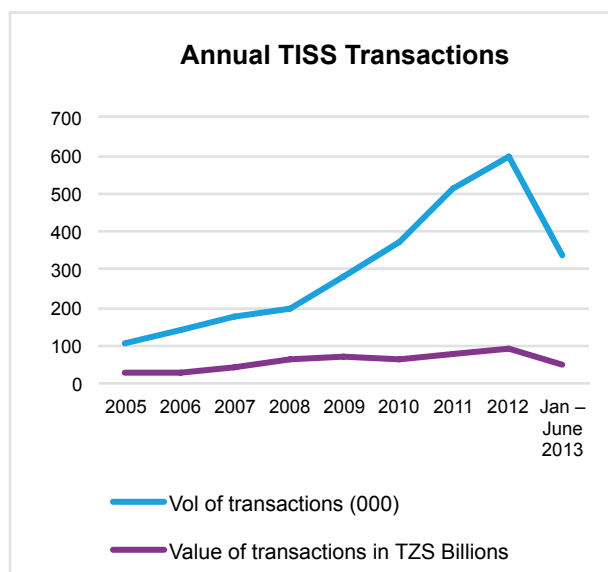
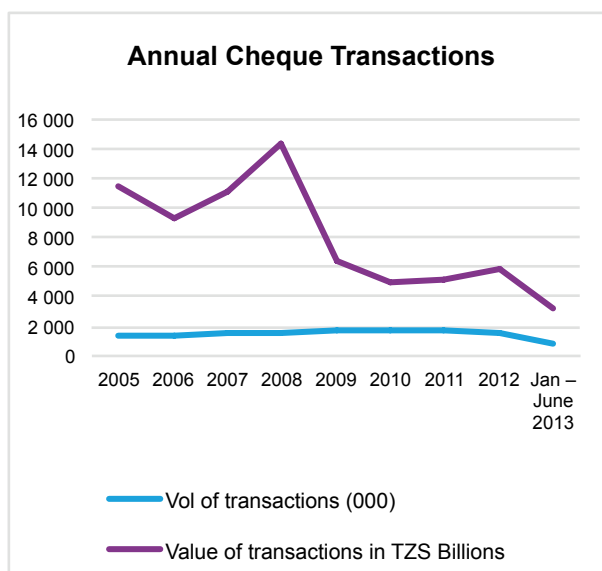
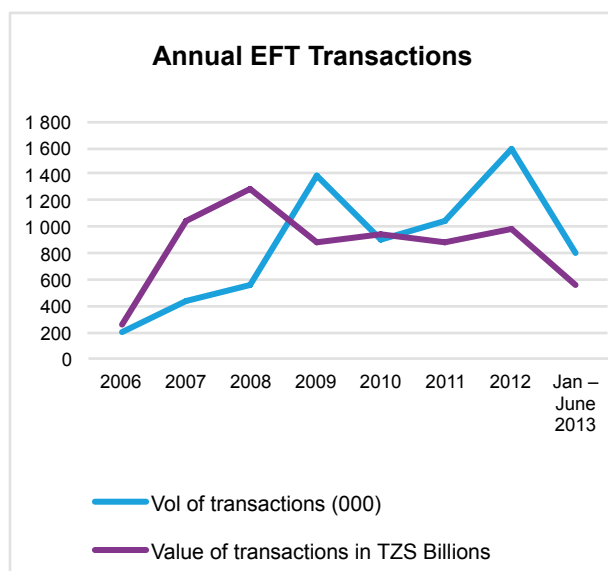
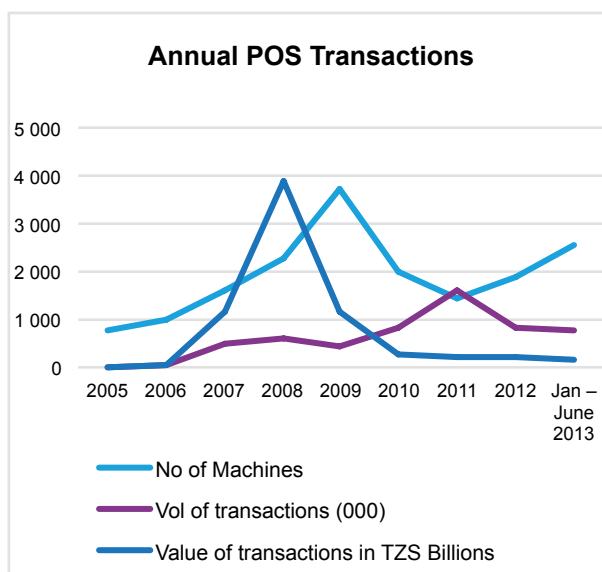
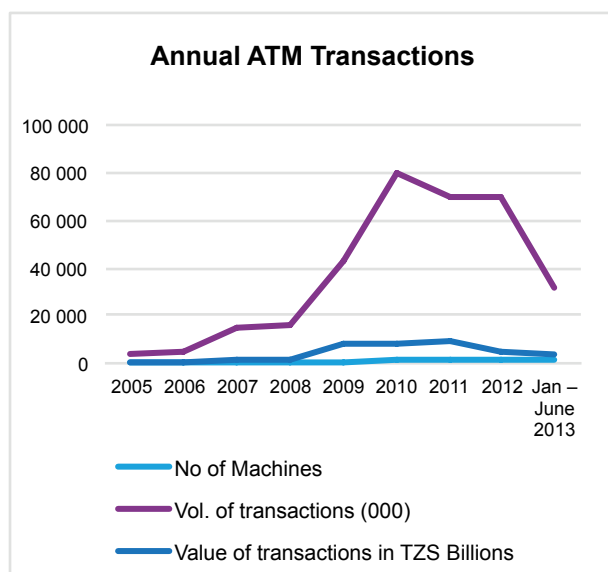
The value of mobile money transactions grew to TSH28.9 trillion (US\$17.93 billion) by the end of 2014, a rise of 65.7 percent from the TSH17.41 trillion (US\$11.3 billion) posted in 2013. It is thought that around 90 percent of the adult population now has access to a mobile money account and 43 percent are active users.

In an effort to further increase access to financial services, the Bank of Tanzania (BOT) now also allows for the use of agents and the agent network is rapidly growing. The banks increased their agent networks by 57 percent between 2012 and 2013 with five commercial banks (CRDB, Tanzania Postal Bank, DCB Commercial, Equity Bank Tanzania and Amana Bank) leading the charge. However, data suggests that around two-thirds of all agents are concentrated in Dar es Salaam, Arusha and Mwanza (the three cities also boast more than half of the total commercial bank branches and ATMs) where the cost of financial services remains a limiting factor for many individuals.

Tanzania's banks continue to grow their other channels. In fact, the commercial bank branch network grew to 642 branches by the end of December 2013, and the ATM network increased to 1,526 machines from 1,361 over the same period.

Cheques remain the most frequently used non-cash payment instrument in Tanzania and are used primarily by government departments, corporate bodies and individuals who deal with the government. Generally, few individuals write cheques, mainly because personal cheques are normally not accepted, often due to the absence of unique personal identification. Only the Central Bank and commercial banks are allowed to issue cheques.





Source: Bank of Tanzania Annual Report 2014

Key developments: Recent changes in Tanzania's payment environment

Regional harmonisation: The BOT has continued to cooperate with other Central Banks, and regional and international organisations on various issues pertaining to banking supervision. The Bank is a member of various regional cooperation bodies – including the Southern Africa Development Corporation (SADC) and East Africa Community (EAC) – where harmonisation of payment systems is a key agenda topic. The EAC, for example, intends to harmonise payment systems across the five EAC countries. [The BOT has been a keen supporter of harmonisation and has been involved in a number of initiatives such as the Monetary Affairs Committee \(MAC\) of EAC Banks which coordinates harmonisation and cooperation in central banking activities.](#) The BOT has also participated in several regional supervisory initiatives including a supervisory college organised by the Central Bank of Kenya and another organised by the South African Central Bank. The BOT also conducted joint on-site examinations with other East African Central Banks in 2013.

Launch of Mobile Payment Regulations: With no specific regulation in place to govern mobile banking, the BOT has instead adopted a 'test and learn' approach that allows Mobile Network Operators (MNOs) to provide mobile money services. [In 2012, however, the BOT published its Mobile Payment Regulations, establishing a licencing regime for non-banks \(such as MNOs\) who intend to provide mobile payment services. The regulation is centred around a vision for interoperability and any future non-bank mobile payment providers will be required to obtain a license as a wholly-owned subsidiary company.](#)

East Africa Payment System (EAPS): The EAPS links the settlement systems of Tanzania with those of Kenya and Uganda to facilitate cross-border funds transfers for the region. The system was launched in May 2014 in Nairobi, Kenya. The system operates on a real-time gross settlement basis by utilizing the linkage between the various Partner States' Real-Time Gross Settlement (RTGS) systems using SWIFT messaging for safe and secure delivery of payment and settlement messages.

New ICT infrastructure: In July 2015, TTCL (the country's largest telecoms provider) announced that it had introduced a nation-wide 100 percent broadband network that would deliver up to 15mbps of internet speeds regardless of geographical location. Mobile networks are also being developed and improved. In October 2014, Vietnam-based Viettel won a concession to build and operate a 3G network in Tanzania. [And in January 2015, Huawei Technologies won a US\\$182 million contract from TTCL to upgrade landline and 2G, 3G and 4G mobile infrastructure.](#)

Addressing ongoing challenges: Recognising the impact of processing delays in interbank cheque clearing, Tanzania's banks have been introducing document processing using MICR technology. Coupled with the BOT's offer to handle interbank cheque instruments and rationalise clearing procedures and rules, these steps should help improve processing speeds. At the same time, the banks are also addressing the problem of low use in interbank credit payment transfers and ongoing risks associated with online payment on Central Bank accounts by leveraging the BOT's VSAT backbone network between their branches. This move should facilitate interbank payments through the electronic settlement of credit transfers (at least in areas where BOT branches are located).

New interbank media exchange planned: For bulk payments and in areas where MICR is not available, banks are planning to introduce a new interbank media exchange that is expected to reduce the current duplication of efforts and subsequent delays or errors in the processing of bulk payments. It is also expected to speed up the flow of cheques and credit transfers, dramatically cut down the labour involved in processing small value transactions and increase demand for banking services in the country.



Regulatory framework: Balance between growth and risk

Tanzania's payment systems are subject to a range of laws, regulations and guidelines established by the BOT and the Government of Tanzania. The BOT continues to adapt its regulatory stance, particularly in fast moving areas such as agency banking and mobile money. The BOT's approach to regulation in both of these areas has been balanced and clearly aims to encourage continued innovation while implementing appropriate risk-based guidelines and restrictions through an established licensing process.

The main laws governing Tanzania's payment systems include:

- **The Bank of Tanzania (BOT) Act:** First promulgated in 1965 and amended in 2006, the BOT Act provides the Central Bank with the powers to administer and regulate non- bank entities offering payment services. In particular, Section 6 of the Act provides that the BOT is empowered to regulate, monitor, and supervise the payment, clearing and settlement system together with all products and services thereof as well as conduct oversight functions on Tanzania's payment, clearing and settlement systems.

The 2012 draft allowed MNOs to continue to receive “Letters of No Objection” from the BoT to perform as mobile payment service providers. However, this early draft was critically reviewed and discussed by industry players within the country as well as abroad, seeking to improve the draft for its next iteration.

- **The Electronic Payment Schemes Guidelines 2007 (the EPSG) – Mobile Payments Regulations (MPR):** The BOT published the first draft MPR in March of 2012. The main feature of this Act is the establishment of a licensing regime for non- banks, such as MNOs, who intend to provide mobile payments services.
- **Bank of Tanzania Agency-Banking Guidelines (2013):** The guidelines allow commercial banks and microfinance institutions that are authorized to take deposits to provide services through agent networks. The guidelines are part of the BoT's efforts to adapt Tanzania's payment system to meet demand for agency banking and mobile money.

- **The Banking and Financial Institutions Act (2006):** This Act consolidates the laws relating to the business of banking in order to harmonise the operations of all financial institutions in Tanzania. This Act replaces the Banking and Financial Institutions Act (1991).
- **The Evidence Act (1967):** With its origins founded in India and the United Kingdom, this Act – particularly Part IV – provides for Banker's Books Evidence.
- **Tanzania Communication and Regulatory Authority (TCRA) Act (2003):** Mobile phone companies in Tanzania are regulated by the TCRA (which was established by this Act) and the Electronic and Postal (Licensing) Regulations (EPCR) of 2011. These two bodies essentially ensure that mobile companies perform to their required standard whenever a financial transaction is carried out through their services.
- **The Bills of Exchange Ordinance, Cap. 215:** This statute closely resembles, and functions similarly to, the United Kingdom's Bills of Exchange Act (1882).
- **The Bankruptcy Ordinance, Cap. 25:** The Act regulates individuals' and partnerships' insolvency proceedings.
- **The Capital Market and Securities Act (1994):** This Act was passed to promote and facilitate the development of an orderly, fair and efficient capital and securities market in Tanzania.

Other key policies, laws and regulations including:

- The Government Loans, Guarantees and Grants
- The Arbitration Ordinance Cap.15
- The Contract Ordinance, Cap 433

The Companies Ordinance, Cap 212

- The Civil Procedure Code (1966)
- The Penal Code, Cap 16
- Transfer of Business (protection of creditors) Ordinance, Cap. 398.



Evolution of the Tanzania Payments' Regulations

< 1999	2000 - 2003	2004 - 2005	2006 - 2008
<ul style="list-style-type: none"> – 1992: Foreign Exchange Bureau established. – 1993: Automation of Treasury bills and establishment of DBCH. – 1994: Interbank Foreign Exchange Market (IFEM) introduced. – 1996: Payments systems modernized. – 1996: IFEM improved to telephone dealing from an open outcry basis. – 1998: Formation of East African payment systems committee. 	<ul style="list-style-type: none"> – 2000: Tanzania Payment system Vision and Strategic framework established. – 2002: Automation of Bank of Tanzania Electronic Clearing House (BOTECH). – 2003: The Bank of Tanzania Act, 1995 was amended by the Financial Laws (Miscellaneous Amendment) Act, 2003 for the purposes of empowering the Bank with explicit powers on the national payment system. – 2003: Tanzania Communication & Regulatory Authority Act (TCRAA) was enacted. 	<ul style="list-style-type: none"> – 2004: The Tanzania Interbank settlement system (TISS) started operating. – 2004: The Electronic Fund Transfer (EFT) System which facilitates credit clearing of bulk transfer interbank payment was tested and went live. 	<ul style="list-style-type: none"> – 2006: Bank of Tanzania Act amended to give BOT powers to regulate payments entities. – 2008: Vodacom Tanzania launched Vodafone money transfer platform, Mpesa. – 2008: M-Commerce services introduced by Vodacom. – 2007: Launch of Electronic Payment Schemes Guidelines / Mobile Payments Regulations (MPR).
2009 - 2010	2011 - 2012	2013	2014
<ul style="list-style-type: none"> – 2010: Launch of Tigo Pesa and Zantel Ezy pesa. – 2010: Credit Reference Bureau Regulations. – 2010: The banking and Financial Institutions (Credit Reference Databank) Regulations. 	<ul style="list-style-type: none"> – 2011: Airtel money launched. – 2012: Launch of Mobile Payments regulations. – 2011: The Banking and financial Institutions (Financial Leasing) Regulations. – 2011: The Banking and Financial institutions (Mortgage Finance). 	<ul style="list-style-type: none"> – 2013: Development of new cheque standards and specifications (CSS). – 2013: Issue of Agency Banking guidelines. – 2013: Implementation of digital cheque truncation system. 	<ul style="list-style-type: none"> – 2014: Foreign Exchange Exposure limits Regulations. – 2014: Banking & Financial Institutions (Capital Adequacy Regulations). – 2014: The Banking & Financial Institutions (The Financial Disclosure Regulations). – 2014: The Risk Management Regulations. – 2014: Microfinance Activities Regulations.

A closer look: Tanzania's payment systems and operators

Tanzania's RTGS system is supported by a number of clearing systems that provide an effective payment ecosystem.

The real-time gross settlement (RTGS) system – known as the Tanzania Interbank Settlement System or TISS – was developed by the BOT to process high value and time sensitive payments on a real-time basis. The system facilitates settlement of interbank fund transfers, cheques and electronic funds transfer clearing obligations, payment card switch balances and money market transactions.

Participants in TISS include commercial banks and financial institutions, as well as the Tanzania Revenue Authority (as an indirect participant) which uses the system to collect government revenues. TISS participants are also members of SWIFT.

TISS minimizes settlement risks and improves efficiency in the payment system by eliminating the settlement time lag for high value and time sensitive payments. On receipt of the instruction, the receiving bank (payee's bank) is required to credit the beneficiary's account within 2 hours of receiving the instructions. Thus commercial banks participating in TISS are now able to offer efficient and time- effective payment services to their customers on a real-time basis.

Transactions are processed continuously throughout the RTGS business hours. The cut-off time for RTGS payments received via the bank's Electronic Banking platforms is 13.30Hrs and for instructions received via the bank's branch network, the cut-off time is 13.00Hrs.

TISS complies with the 14 Principles for Payment System Modernisation and uses SWIFT messaging standards and FIN Y-Copy Service. Participant Web stations are also provided to connect participants to the TISS central system through a Virtual Private Network.

Besides Tanzania's Electronic Funds Transfer (EFT) system (which facilitates the clearing of bulk credit transfer interbank payments) and the Tanzania SWIFT User Group (a network of 19 member banks that are live connected to the SWIFT Network)

Tanzania has four main clearing systems.

The Dar es Salaam Bankers Clearing House: Launched in 2002, the Dar es Salaam Clearing House (BOTECH) system aims to promote efficiency in the payments sector by enhancing processing speed, minimising errors and reducing fraud in interbank transactions.

The Arusha Bankers Clearing House: This Clearing House facilitates the electronic clearing of cheques. Founded in 2007, the system was developed by the BOT to support efficient cheque clearing in areas served by the Arusha Clearing House. The system is also able to process EFTs for the recurring bulk payment of salaries, bills and so on.

Delivery versus Payment (DVP) Clearing System:

While DVP mechanisms exist for transactions channelled through Primary Dealer's accounts maintained at the BOT (the value is realised on settlement date since the funds are automatically transferred from the PD's account to the government account on the value date), there is no similar mechanism for cheque payments made by direct participants in treasury auction (since the cheques must be cleared through normal banking clearing systems). This will require the existing electronic book entry system for government securities to be interfaced with the BOT accounting system and the TISS.

Tanzania Automated Clearing House (TACH): TACH is an electronic clearing system that processes cheques in real-time by sending images instead of physical cheques, essentially digitising the cheque clearing system in Tanzania. With TACH, transactions are now settled within a day. The new clearing system also seeks to enhance the safety and efficiency of clearing operations and, at the same time, increase security features on cheques. The system also supports the processing of EFTs by introducing multiple settlement windows within the day.

Besides the banks and financial institutions who play a traditional and central role in the management of payments in Tanzania, the market also includes a number of new players and channels that are driving significant change across Tanzania's payment systems. Mobile channels, in particular, are gaining popularity with some estimates suggesting that around 35 percent of households now have at least one mobile money user.



Some of the main operators in Tanzania's payment systems include:

Mobile Network Operators: There are four major MNOs providing mobile money services in Tanzania: Vodacom's M-Pesa, Tigo Pesa, Zantel Ezy-Pesa and Airtel Money.

Vodacom's M-Pesa is the leading provider with 53 percent of the market, followed by Tigo Pesa and Airtel Money. All MNO-provided services require a customer to register for a mobile wallet, or stored value account.

Currently, the primary use of mobile money in Tanzania is to support P2P transfers.

However, as mobile money matures, a variety of additional services are being applied to the product, increasing the use cases for the mobile wallet.

JamboPay: A Kenyan-based electronic payments service provider, JamboPay services more than 1,500 merchants in Kenya, Tanzania and Senegal. JamboPay enables consumers to pay for goods and services online while sellers can receive payments for purchases made online. Users can pay bills, fees, make donations and conduct other payments from anywhere in the world.

3G Direct Pay: This is the leading online ecommerce payments processor, providing payment services to hundreds of travel related businesses in Eastern and Southern Africa, focusing on Kenya, Zambia, Tanzania, Uganda, Rwanda and Zanzibar. 3G Direct Pay enables customers to shop online and pay in real-time using credit cards, mobile money or bank transfers. The company recently partnered with Kopo Kopo's end-to-end platform to expand their reach across the continent.

PesaPal: PesaPal provides consumers with an easy-to-use and secure online payment system that can be used to pay for goods and services either through the internet or through a mobile handset. For businesses, PesaPal offers payment settlement to their bank of choice. PesaPal has partnered with banks, MNOs and credit card companies to provide a wide range of payment options.

PayPal: This global e-commerce platform is available to citizens of Tanzania, allowing payments and money transfers to be made through the internet. Residents of Tanzania who have PayPal accounts can send or receive money to and from any other person who has a PayPal account.

The shift to digital: Evolving payment options in Tanzania

Currently, Tanzanians have access to a range of physical, electronic and mobile money systems including ATMs, POS devices, electronic cards, mobile and internet banking, mobile payments and money transfer services. Use of electronic payment systems, particularly mobile, has grown significantly over the past five years and these options are widely credited with improving access to financial services for both urban and rural populations.

Cash remains the dominant payment instrument in Tanzania and cheques are rarely used outside of government departments, corporate bodies and those who deal with government bodies.

Few individuals use cheques in Tanzania and the bulk of the volume (1.6 million cheques were cleared in 2012) and value (TZS5.89 trillion) can be attributed to large and regular government and corporate payments.



Increasingly, Tanzanians also have access to a range of electronic payment infrastructure and channels options. These include:

- **ATMs:** Tanzania's banks are deploying more ATMs across the country with approximately 150 new ATMs installed each year, adding to the 1,526 machines that were in use at the end of 2013. The value of transactions conducted on ATMs is also increasing from the TZS7.6 trillion conducted in 2013.
- **POS:** Deployment of POS devices is also on the rise. By the close of 2013, Tanzania boasted more than 2,500 active POS devices, facilitating almost TZS350 billion in transactions in 2013 (an increase of 75 percent over the previous year). Cards can be pre-paid or post-paid.
- **Electronic Funds Transfer (EFT):** Tanzania's EFT system facilitates credit clearing of bulk interbank transfers. Volumes have been increasing with 1.6 million transactions recorded in 2012, representing almost TZS1 trillion in transaction value. The system has recently been enhanced to process requests directly to the beneficiary's account.
- **Mobile payments:** Mobile payments are also enjoying significant growth. In 2013, the number of registered users rose by 18.4 percent to 31.8 million. Total value of mobile payment transactions increased by 65.74 percent (to TZS28.8 billion) suggesting customers are becoming more comfortable with the system. As noted earlier, there are four main providers of mobile payment services in Tanzania.
- **Mobile and internet banking:** As Tanzania's banks roll out new and improved internet and mobile banking platforms, volumes and values have quickly increased.

The value of internet banking transactions rose by more than 28 percent in 2012 (to TZS22 billion) while the value of mobile banking transactions skyrocketed by more than 94 percent (to TZS587 million).

A closer look: The growth of e-commerce in Tanzania

As Tanzania's population increasingly moves online through the increased adoption of the internet and mobile phones, e-commerce is taking off across the country. While there are still some clear shortcomings (particularly related to infrastructure), most Tanzanians now have access to an internet connection through cell phones, home PCs, corporate access or even public kiosks. And this has driven a massive shift in the way Tanzanians interact and communicate with each other.

A number of ventures have emerged to facilitate online shopping and e-commerce in Tanzania. The most recommended source for user-generated classifieds is Zoom Tanzania. But there are a number of others that are quickly gaining market recognition and loyalty. These include SSJ Internet Consultant, DeSiaMore Company, LtWazoeftu Technology, Grey Fade ICT Solutions, Infinity360 web design East Africa, Globalwissoftnet, and Webtec Consult.

However, despite the huge opportunities presented by e-commerce, most SMEs in Tanzania have yet to take advantage of these. The reasons for this are varied and include issues (both real and perceived) such as inadequate telecommunication infrastructure, poor e-commerce security systems, inadequate IT education and training, poor e-readiness, socio-cultural beliefs and a lack of local IT experts.



The move to mobile: Innovation and adoption in Tanzania's mobile payment sector

The introduction and widespread adoption of mobile payments creates a massive opportunity for Tanzania to improve access to financial services for millions of its citizens. For consumers, mobile payments offer unprecedented freedom, functionality, convenience and ease of use. For providers, the deep penetration of mobile phones coupled with strong networks provides an opportunity to reach the unbanked and previously untapped markets.

Tanzania is a world leader in the use and adoption of mobile money. Indeed, with more than 30 percent of adult Tanzanians already using at least one of the four existing mobile money solutions, Tanzania is on a short list of countries world-wide that have reached a critical mass of active users.

Tanzania also claims some of the largest mobile money solutions in the world. According to the GSMA (a global association of telecommunications companies) there were 163 'live' mobile money solutions active in 74 countries in 2012. And of the 11 schemes that could boast more than 1 million registered users, two were from Tanzania.

In fact, both Tanzanian deployments claim more than a million active users, not only when calculated by the number who use it every 90 days, but also when calculated by the number who use it every 30 days.

There are a number of factors that contribute to this high adoption rate for mobile money in Tanzania. These include:

- **High mobile penetration:** Estimates suggest that more than half of the total population has access to a mobile phone capable of conducting mobile money transactions.
- **Strong network coverage:** More than three-quarters of the population is covered by at least one mobile network.
- **Young population:** With a median age of just 18.5 years, adoption of new technologies is high among the youth.
- **High literacy:** Estimates suggest that at least 70 percent of Tanzania's population is literate.
- **Enabling regulation:** The BOT is balancing innovation against risk-management to create an enabling regulatory environment.
- **Competitive marketplace:** MNOs have placed significant time and investment into mobile money and competition is fierce for both mobile voice and mobile money services.

Based on the current rate of mobile phone adoption, the Tanzanian mobile money market shows potential for further growth. Sixty-three percent of households have access to a mobile phone and 56 percent own at least one active SIM card (a requirement for opening an m-money account). Even among the poorest segments of society – those living on less than US\$2 per day – adoption rates remain above 50 percent.

As noted earlier in this country spotlight, there are currently four major mobile money services available in Tanzania (Vodacom M-Pesa, Tigo Pesa, Zantel Ezy-Pesa and Airtel Money). Each is managed by an MNO (as opposed to a bank) and all require customers to register for a mobile wallet or stored value account.



The data indicates that Tanzanians often subscribe to multiple mobile payment and mobile money accounts. At the end of 2014, there were 31.9 million mobile telephone subscribers in Tanzania, up 19 percent over the previous year.

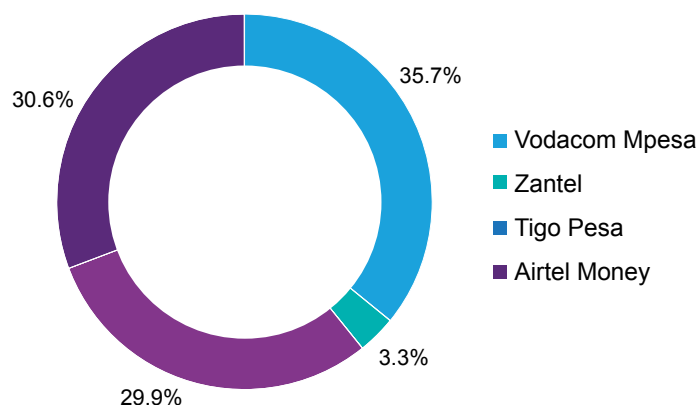
According to Business Monitor International, mobile subscriptions are expected to rise to 43.8 million by 2019, which would equal a penetration rate of around 75 percent.

However, by 2013, Tanzania had recorded 31.8 million subscriptions to mobile payment services (an increase of 18.5 percent over 2012). And by 2014, more than 32.5 million mobile money accounts had been registered with the Bank of Tanzania.

Not surprisingly, the BOT has taken a keen interest in the mobile payments and money markets and is currently working to tighten the legal and regulatory framework governing the sector. As noted earlier, draft Mobile Payment Regulations (MPR) have been developed and are current under review. However, it is clear that the future success of mobile money – particularly in responding to the need for improved access to financial services – will depend on the future status of the legal and regulatory framework.

The reality is that Tanzania's vibrant mobile money market developed in a regulatory environment without a National Payment Systems Act and it is increasingly clear that the current guidelines for electronic payment schemes are not sufficient to serve as a guide for mobile financial services.

Tanzania Mobile Money Market shares



Source: Bank of Tanzania Annual Report 2014

Greater focus will therefore need to be placed on developing supportive policy and regulatory frameworks for the mobile model, not only related to the financial services sector, but also related to telecommunications, competition and e-commerce.

Given the potential benefits that mobile could provide the country, the BOT encourages new market players and the development of new mobile schemes. But it is worth noting that the BOT still requires that any financial services that have implications for deposit taking be conducted by banks or non-bank financial institutions.



Innovation and emulation: Applying mobile to banking in Tanzania

Right around the world, mobile banking is unlocking new and innovative channels and ideas. Here are some of the ways mobile banking and payments are being used in Tanzania:

- **Reducing risk for Village Savings and Loans (VSL):** VSLs are essentially grass-roots banking organisations that bring together groups of peers in communities to pool funds that can be used for savings, insurance and credit purposes. However, as these programs mature, they generally begin to generate larger sums which creates risks and challenges related to storing and securing large amounts of cash. Working with Care's Access Africa program, Vodacom is now offering customised M-Pesa wallets to VSLs. Ultimately, Care's ambition is to link these wallets to a commercial bank account to improve security and help villages better manage their risk.
- **Bulk payments via mobile:** Tanzanian businesses, government ministries and NGOs are increasingly using mobile to pay multiple recipients at one time, thereby avoiding many of the risks and costs associated with cash. Airtel, for example, uses their own product (Airtel Money) throughout their distribution channel and has reported significant cost savings and efficiency gains as a result.
- **Peer-to-peer (P2P):** While P2P platforms are common around the world, a recent survey found that 85 percent of Tanzanian mobile money users had received money in the last 4 weeks and 62 percent had sent money via mobile. Similar to other markets, Tanzanian mobile money users can send money directly to the mobile account of a registered user of the same service or to the mobile phone of an un-registered user or a user of another service.
- **Airtime top-ups:** This is one of the most popular mobile banking services with around 46 percent of active mobile money users saying they had used their account to purchase airtime in the past 4 weeks. Mobile top-ups allow account holders to purchase prepaid airtime from their mobile provider without having to visit an airtime reseller.



Looking ahead: Overcoming the challenges facing Tanzania's payment system

Despite the robust growth of alternative payment channels such as electronic and mobile payments, Tanzania's payment systems continue to face significant challenges that will need to be overcome before the country can boast a truly competitive payment sector.

Some will need to be faced head-on by the BOT. Indeed, the regulatory structure in Tanzania is largely characterized by regulatory gaps, overlaps, a multiplicity of regulators, inconsistency in regulations and differences in operational standards, all of which lead to a reduced pace in implementing key and highly necessary regulation. We believe there is a need for a more consolidated approach to the implementation of regulatory frameworks to manage the implementation of multiple payment systems that rely on interoperability.

The BOT will also need to contend with the current lack of “failure to settle” arrangements at the clearing houses which creates significant risks should a bank default. At the moment, the BOT maintains an implicit settlement guarantee to clearing houses of an automatic settlement overdraft should a commercial bank fail to meet its settlement obligations. Creating an explicit “failure to settle” arrangement will be key to driving confidence and improving competition in the market.

Tanzania's payment systems also face a number of risks. Fraud had been a high risk through 2013, but the introduction of the TISS is expected to help reduce this risk significantly. However, there are other – known and unknown – risks that are associated with payment systems and more care must be given to anticipating, identifying and suitably addressing risks to ensure that the system remains secure and resilient. As the market shifts towards electronic payments, these risks may increase.

Payment systems in Tanzania also face specific risks related to foreign exchange settlement. Time zone differences, currency differences and the requirement for completion and confirmation of receipts from foreign correspondents may result in delays before payment is finalized. Such delays expose banks to credit risks in the event of a major financial disturbance occurring in the country of the correspondent partner before the correspondent partner meets its settlement obligations. The delays also expose the participants to market risks resulting from adverse movement of exchange rates. More interoperability between Tanzanian and international banks will be necessary in order to better manage this risk.

Much like other markets in the region, Tanzania will need to contend with a basket of other, more tactical challenges, some of these include inefficient clearing and settlement procedures and controls that will need to be improved. In order to address the many challenges (i.e. reducing payment clearing, switching and settlement delays, reducing large cash floats, improving and increasing payment automation across the value chain) regulators and industry participants would need to work together to strengthen institutional structures, architectures, laws and regulations.



4



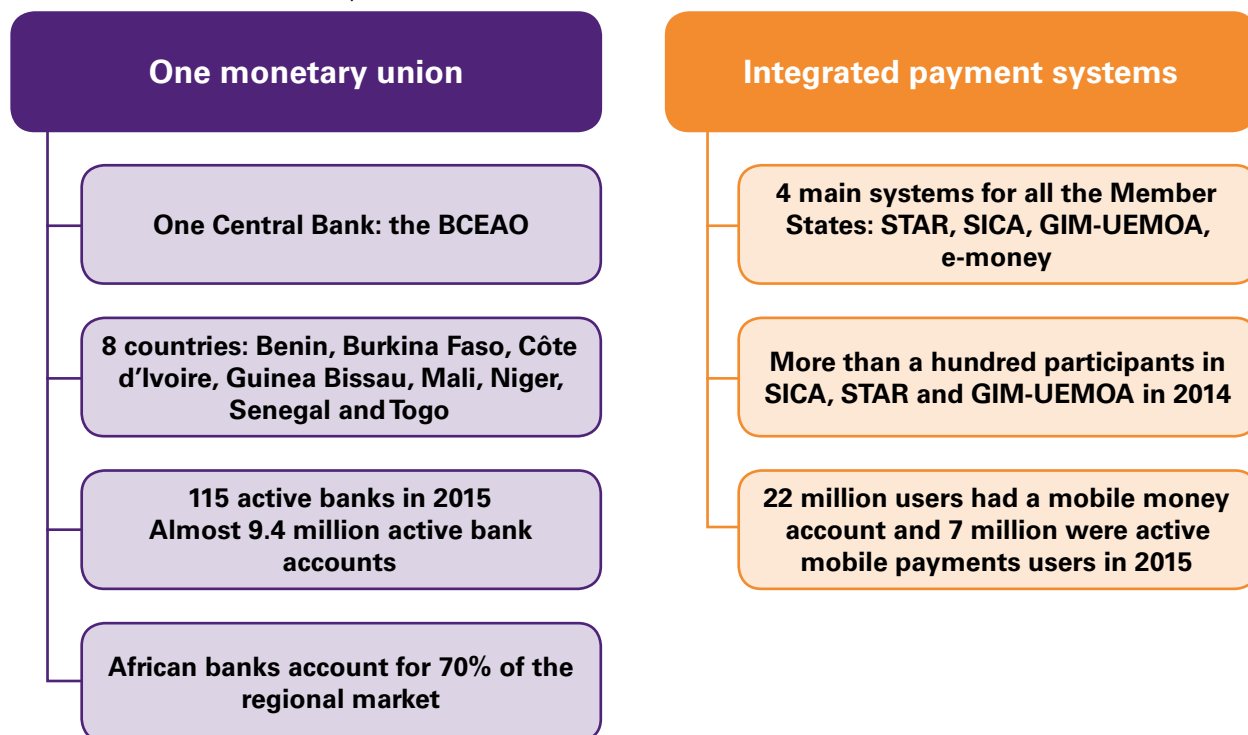
Regional Spotlight

WAEMU Drives Regional Payments Cooperation

Over the past two decades, the Central Bank of West African States (BCEAO) has been rolling out a series of reforms aimed at modernising the West African Economic and Monetary Union's (WAEMU) payment systems, automating trading and settlement systems and developing an interbank card payment system. This section highlights key regulatory trends and the evolution of payment systems in the region.

Overview: Reforming the payment system

The BCEAO was created in 1959 while the treaty establishing WAEMU was signed in May 1962, giving the BCEAO the right to issue a common currency for the region. In 1999, the Central Bank launched a major reform program aimed at improving the region's payment systems. The reform program revolves around three major axes: 1) large-value transactions, 2) small payments and 3) interbank payment cards. The accompanied diagrammed indicates the current state of the monetary union.

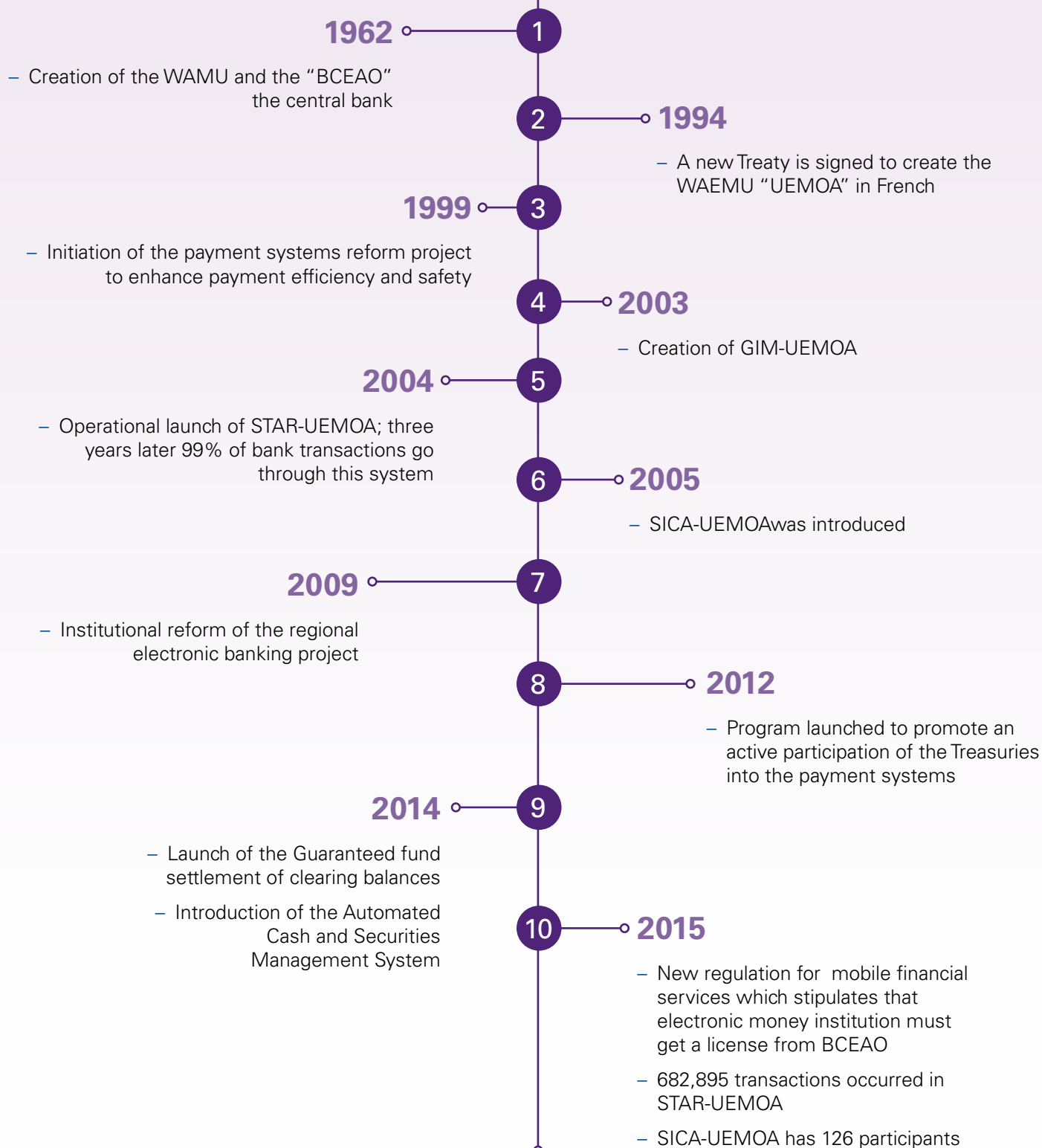


BCEAO: Central Bank of West African States
GIM-UEMOA: The WAEMU Interbank Card Processing Grouping

STAR: Automated Transfer and Settlement System
WAEMU: West African Economic and Monetary Union
SICA: Automated Interbank Clearing System

The West African Monetary Union: An evolving and strengthening relationship

Key dates



Today, the principal members of the CFA Franc Zone are France and the two African economic unions that are served by these Central Banks (WAEMU and the Central African Economic and Monetary Community (CEMAC)). Interestingly, both Central Banks issue CFA Francs and both are fixed to the Euro at the same rate (CFA665.957 to EUR1). But while both CFA Francs are nominally convertible into the Euro, they are not directly convertible into each other.

France continues to play a key role in the currency and guarantees the peg of the CFA Franc to the Euro. Importantly, it also provides an operations account within the French Treasury that can be drawn upon by the Central Banks in case of reserve shortages.

To ensure that this arrangement does not become an 'unlimited overdraft', a number of institutional safeguards and restrictions have been developed. For example, at least 20 percent of overnight deposits of each Central Bank must be covered by foreign exchange reserves and at least 50 percent of foreign exchange reserves must be held in the operations account. The arrangements also allow for increasing interest rate penalties if there is an overdraft. At the governance level, France is also represented on the board of both institutions.

This leaves the Central Banks responsible for conducting monetary policy within their respective regions, albeit within the limits of the fixed exchange rate arrangement. Both Central Banks are also charged with implementing banking supervision at the regional level.

Regulatory framework: A suite of payment system regulations

The WAEMU payment systems are regulated through a variety of key regulations, instructions, directives and legislation. Some of the key regulations include:

- **Regulation No. 15/2002/CM/UEMOA on Payment Systems:** This text forms the basis for payment system regulation in the region. It covers topics such as participants, the nature of relevant transactions, procedures for securing payment systems (including electronic evidence) and means of payments (such as cheques, bank cards and bills of exchange).
- **Instruction of 8 May 2003 on the promotion of non-cash payments and determination of the interest required in case of default:** This instruction essentially sets the threshold for a payment to be processed through book money. It also requires that any payment above CFA100,000 conducted between two persons must be transacted with non-cash money.
- **Decision No. 31 of 29/09/2015/CM/UEMOA on the clearing and settlement of electronic payment transactions in the West African Monetary Union (WAEMU):** This regulation governs the currency for clearing and settlements and the authorisation required from the Central Bank for any clearing and settlement system to operate. It stipulates that clearing and settlements must be done in CFA Francs.



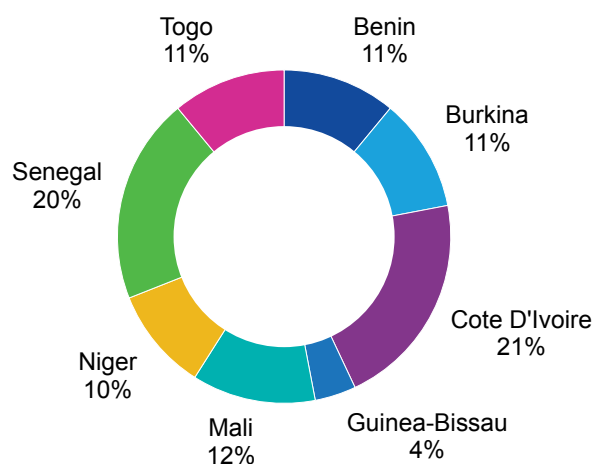
Instruction No. 008-05-2015 governing the terms and conditions of exercise of electronic money issuers activities in Member States of the West African Monetary Union (WAEMU): This instruction governs electronic money and is focussed on ensuring the security and reliability of the system. There are seven Articles that are particularly relevant for those attempting to fulfil the e-money institution establishment conditions:

- **Article 4:** Partnership agreement: This relates to the choice of technical operator. The e-money issuer can create partnerships with one or more technical operators. However, these partnership activities must be limited to the technical treatment of e-money and its distribution.
- **Article 5:** This article stipulates that electronic money institutions are not allowed to grant any credit services to its clients.
- **Article 5:** This article stipulates that electronic money institutions are not allowed to grant any credit services to its clients.
- **Article 6:** This requires electronic money transactions with non- member states of the WAEMU to take place in accordance with the regulation of external financial relations of WAEMU.
- **Article 9:** This governs the legal form and registration items. It requires institutions to be constituted as limited companies or Limited Liability Companies, cooperatives or economic interest groups. The purpose of the institution must focus exclusively on this activity.
- **Article 10:** This article requires the head office of the institution to be located in the territory of one of the WAEMU Member States.
- **Article 11:** This sets the minimum share capital at CFA300 million. It also requires the minimum share capital to be fully subscribed and fully paid-up prior to license approval.
- **Article 16:** This article requires electronic money institutions to comply with the prudential regulations set by the BCEAO.
- **Other key payment regulation in WAEMU:**
 - Instruction No. 009-07-RSP-2010 of 26 July 2010 on the centralising device and dissemination of WAEMU payment incidents.
 - Instruction N ° 141 - 04-07 of 30 April 2007 on the accreditation procedure of the qualifying body and the process of evaluation and qualification of electronic certification service providers in the WAEMU Payment Systems.
 - Directive No. 08-2002-CM-UEMOA on measures to promote the banking and use of cashless payments.
 - Uniform legislation on infringements on payment instruments.

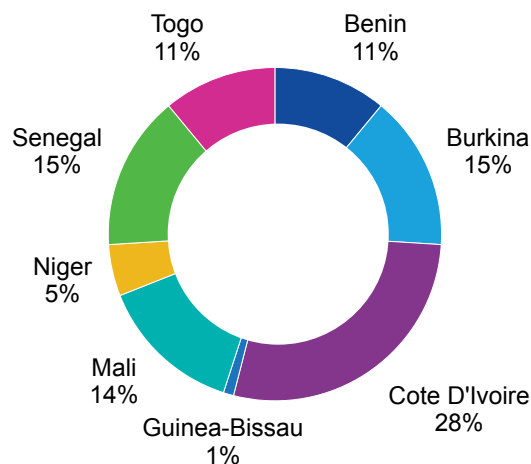
The WAEMU banking environment: A growth story

The banking system in the West African Monetary Union is enjoying robust growth. There are currently 115 active banks in the region, of which one in five is located in Cote d'Ivoire. Between December 2014 and December 2015, overall bank assets grew by 18.9 percent to reach CFA28.2 billion. At the same time, the number of ATMs increased by 8.9 percent to 2 430, while the staff employed in banks increased by 5 percent.

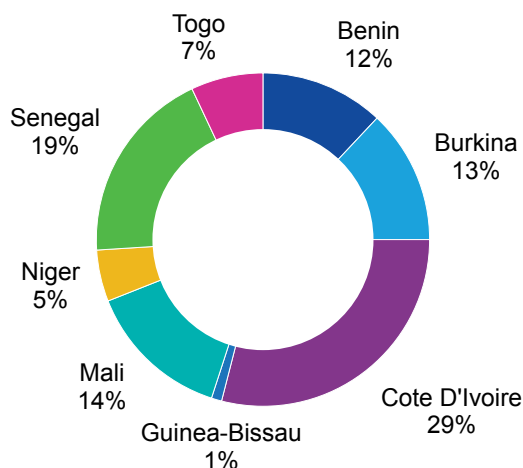
Number of banks (2015)



Share of bank accounts (2015)



Market share of assets (2015)



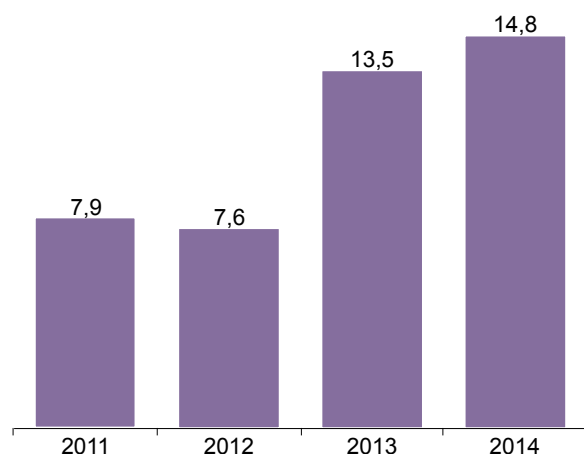
WAEMU Key Figures in 2015

- 8 countries
- 115 active banks
- 28 215 billion total assets
- 9 374 215 active bank accounts
- 25 597 jobs

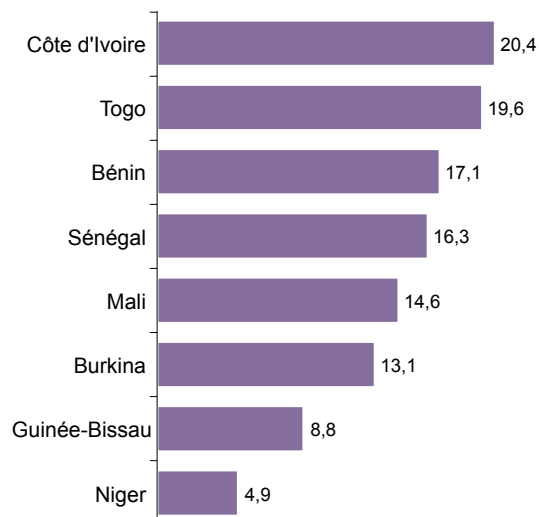
Thanks in part to the Central Bank's ongoing financial education program, the number of customer accounts rose by 7.9 percent in 2015. Cote d'Ivoire and Burkina Faso make up 42 percent of the accounts in the region. (to a decline of 3.3 percent in the previous year). Cote d'Ivoire is the largest market in the region, accounting for almost 30 percent of banking assets and 27.8 percent of customer accounts. The country also has the most ATMs: its nearly 900 machines account for almost a third of all ATMs in the region.

While the overall level of access to banking services remains stubbornly low, the latest available data suggests a significant improvement during 2011-2014. Cote d'Ivoire enjoys the highest rate of access at 20.4 percent, followed by Togo and Benin.

Share of WAEMU population with access to banking services (%)



Share of population with access to banking services, 2014 (%)



The largest 13 banks within WAEMU account for almost 80% of banking assets and 76.5 percent of customer accounts. Three banks based in Morocco - Bank Of Africa (BOA), Atlantic Business International (ABI) and Attijariwafa Bank - represent 28.5 percent of tellers and 25.8 percent of ATMs in WAEMU.

Distribution of banks across countries (2015)

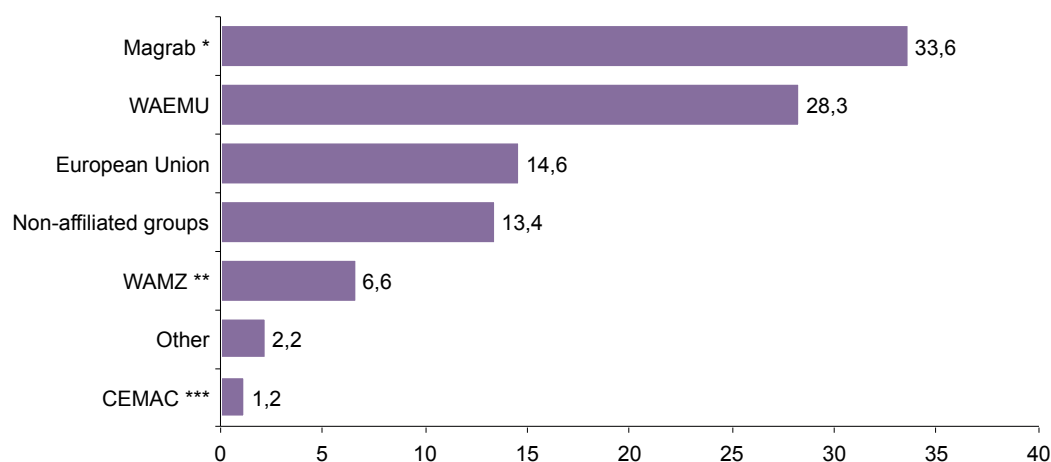
Country	Banks	Financial institutions	Total active	Total assets (CFA billion)	Market share (%)	ATMs	Accounts
Benin	13	0	13	3 324	11.8	277	1 056 113
Burkina Faso	13	4	17	3 769	13.4	341	1 358 761
Côte d'Ivoire	24	2	26	8 294	29.4	896	2 608 537
Guinea-Bissau	4	0	4	195	0.7	42	97 689
Mali	14	3	17	3 841	13.6	405	1 310 529
Niger	11	1	12	1 269	4.5	145	481 715
Senegal	23	2	25	5 463	19.4	454	1 391 205
Togo	13	2	15	2 059	7.3	239	1 069 666
Total	115	14	129	28 215	100	2 799	9 374 215

Sources: BCEAO Annual Report 2015

The largest WAEMU-based banks are Ecobank, Oragroup, Coris Bank International (CBI), NSIA Banque and Banque de Développement du Mali (BDM). Combined, these five banks account for 2.6 million customer accounts which they service through 25 branches and 876 ATMs.

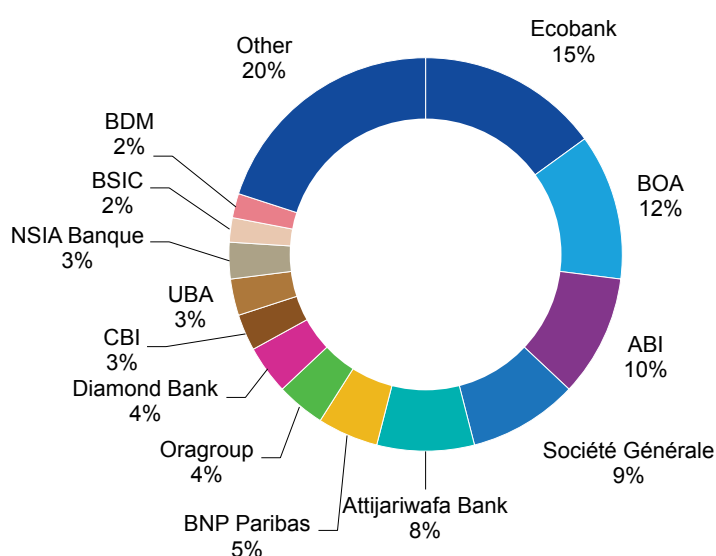
Banks from the Magreb (Morocco, Libya, Tunisia and Mauritania) region have a market share of 33.6 percent, while banks from the WAEMU region itself accounts for 28.3 percent of the market.

Market share of banking groups by geographical area of origin (%)



Sources: BCEAO Annual Report 2015

Market share of banking groups (2015)



Sources: BCEAO Annual Report 2015

Société Générale and BNP Paribas are the two largest France-based banks in the francophone WAEMU region, holding a market share of 14.1 percent. The CFA franc (the regional currency) is pegged to the euro through a guarantee by the French treasury

ABI, CBI, Société Générale and Attijariwafa Bank all added one branch each to their WAEMU networks during 2015. CBI's expansion during the year included a net increase in customer accounts of nearly 40 000, raising its market share from 2.7 percent in 2014 to 3.2 percent in 2015.

Largest banks in WAEMU (2015)

Bank	Country	Number of branches	Market share (%)	ATMs	Accounts
Ecobank	Togo	8	15.0	588	1 668 610
Bank Of Africa (BOA)	Morocco	8	12.0	280	1 406 132
Atlantic Business International (ABI)	Morocco	8	9.7	204	684 318
Société Générale	France	5	9.3	185	628 072
Attijariwafa Bank	Morocco	8	7.9	238	881 176
BNP Paribas	France	4	4.8	165	403 091
Oragroup	Togo	8	4.0	70	281 226
Diamond Bank	Nigeria	4	3.7	48	187 484
Coris Bank International (CBI)	Burkina Faso	4	3.2	42	262 478
United Bank for Africa (UBA)	Nigeria	4	2.7	92	206 233
NSIA Banque	Côte d'Ivoire	1	2.7	112	253 104
BSIC	Libye	7	2.5	95	149 987
BDM	Mali	4	2.4	64	159 362
Other	n/a	42	20.1	616	2 202 941
Total	n/a	73	100.0	2 799	9 374 215

Sources: BCEAO Annual Report 2015



The Central Bank: A closer look at the BCEAO

Created in 1962, the Central Bank of West African States (BCEAO) is an international public institution headquartered in Dakar, Senegal. It is the common Institute for currency issuance of the Member States of the West African Economic and Monetary Union (WAEMU).



Managing payment systems: Monitoring in the WAEMU

The Central Bank is responsible for the promotion of the proper functioning and supervision of the payment system in WAEMU, according to Article 9 of the constitution. As such, the BCEAO takes all necessary measures to ensure the reliability, availability and security of the systems it manages.

The WAEMU payment system policy adopted in 2006 also notes that the main objective of the BCEAO is to maintain financial stability in the area by promoting efficient, reliable and secure payment systems that operate effectively for all participants. The scope of monitoring covers all payment systems including electronic money payment systems and money transfer.

From an organisational standpoint, monitoring of the payment systems is undertaken within the Directorate of Payments with the support of the National Offices Payment Systems Services. The National Offices of the BCEAO are proximity supervisors and, in this context, perform the data collection and basic analysis duties.

Defining WAEMU's Payment System

According to the Principles for Infrastructure Markets (2012), a system of payment is “a set of instruments, procedures and rules for the transfer of funds between participants; it includes the participants and the operating entity”

Payment systems provide clearing, settlement and payment operations between different participants for their own account or on behalf of others.



The supervision of the WAEMU payment systems is conducted through on-site and off-site monitoring.

- **On-site monitoring:** These are conducted either as small missions to verify specific points or as heavier and longer-term missions focussed on the entire operational system including technical and legal reviews as well as in-depth discussions with the supervisory entity.
- **Off-site monitoring:** A regular and periodic collection of information to enable continuous monitoring of the actual operating conditions and use of the payment systems within WAEMU, as well as periodic evaluations of each payment system through questionnaires aimed at verifying compliance with international principles and standards.

The Central Bank also improves monitoring by encouraging active cooperation between structures responsible for the oversight of payment systems and the banking and financial sector authorities. These include the Regional Council for Public Savings and Financial Markets (CREPMF), the structures responsible for the supervision of microfinance institutions and the General Secretariat of the Banking Commission of WAMU.

In 2007, the Central Bank proposed a framework for the exchange of information with the General Secretariat of the Banking Commission that would effectively demonstrate the risks, rules and procedures in the payment system. The supervisor is responsible for checking on its own methods and tools to control these risks by participants.

For methodology, the BCEAO focuses on assessing the functionality of payment systems and verifying their compliance with international standards, including those published by the Bank for International Settlements. The framework is supported by [Regulation No. 15/2002/CM/UEMOA of 19 September 2002](#) relating to payment systems in the Member States of WAEMU, which affirms the Central Bank's monitoring commitment and how it will be implemented.

Some recent highlights of the WAEMU payment system include:

- The creation of the Fund Settlement Guarantee with an allocation of CFA6.9 billion and 120 members
- A survey to assess the satisfaction of users of the regional system for real-time gross settlement of major systemic transactions (STAR-UEMOA) under the Central Bank's ISO9001 quality policy
- The execution of a second round of user training on payment systems
- The launch of audit mission approval platforms for payment system participants
- Incident simulation exercises at regional and national STAR-UEMOA clearing systems
- The introduction of three new members into STAR-UEMOA (the National Development Bank (BNDE) in Senegal, the Bank of Africa (BOA) in Togo and CBAO in Niger)
- The introduction of four new members (Public Treasury Mali, CBAO Niger, BNDE of Senegal and BOA in Togo) into the Automated Interbank Clearing System (SICA-UEMOA) and a change in the mode of participation for the Bank of Habitat of Benin.



STAR-UEMOA: A regional system for real-time gross transaction settlement

STAR-UEMOA is a centralised system for the real-time gross settlement of major systemic transactions. It is headquartered at the BCEAO with participants (both direct and indirect) connecting via SWIFT or private BCEAO networks (VSAT).

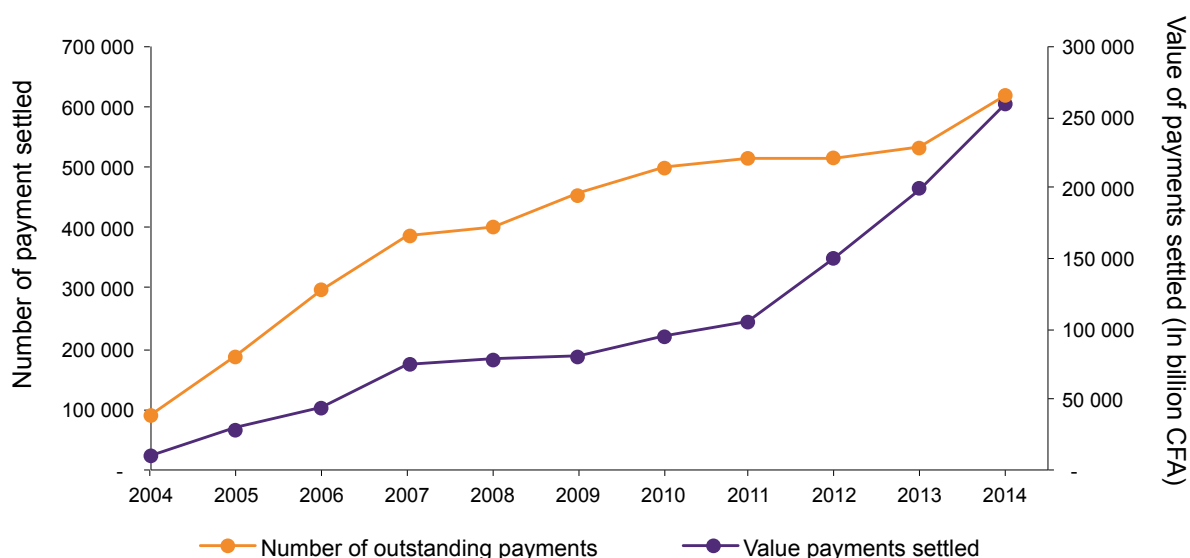
STAR-UEMOA allows the ongoing settlement of accepted transactions in central currency on a gross basis. The system focuses on transfers for the account of the originator institution or for third parties, settlement of security exchanges (SAGETIL-WAMU), Monetary Policy operations, withdrawals and escrows, and the settlement of SICA-UEMOA clearing balances for interbank electronic banking and for the Regional Stock Exchange (BRVM).

STAR-UEMOA began operations June 25, 2004 and by the end of 2014 had 109 participants. In 2014, STAR -UEMOA settled 629,446 payment orders, an increase of 12.9 percent over 2013 and a rise of almost 600 percent over the past decade. In part, the recent growth is likely due to the introduction into the system of SAGETIL-WAMU, ongoing discussions between the BCEAO and banks, and improved understanding of the system by users.

Importantly, the annual value of transactions also rose from CFA188,458 billion to CFA257,863 billion, an increase of 36.9 percent (largely due to increased liquidity injections as part of the Central Bank monetary policy). Volume was also up (2,430 transactions in 2014 versus 2,145 in 2013).

According to an independent survey conducted in 2013, the vast majority – 94 percent – of the system’s users were satisfied with its performance.

Annual changes in the number and value of payments settled



Sources: BCEAO, Annual Report 2014

SICA-UEMOA: The Automated Interbank Clearing System

SICA-UEMOA is an automated exchange system for payment transactions that essentially manages the clearance of multilateral transactions. The operations of SICA-UEMOA are based on a decentralised architecture articulated around eight National Clearing Systems and a regional Clearing System for intra-WAEMU values. The operations of the system are automated from exchanges to settlement based on paperless evidence.

SICA-UEMOA covers transactions up to CFA50 million, interbank levies and commercial paper and, at the end of 2014, had 122 participants (namely banks, financial services post entities, national public treasuries and the BCEAO).

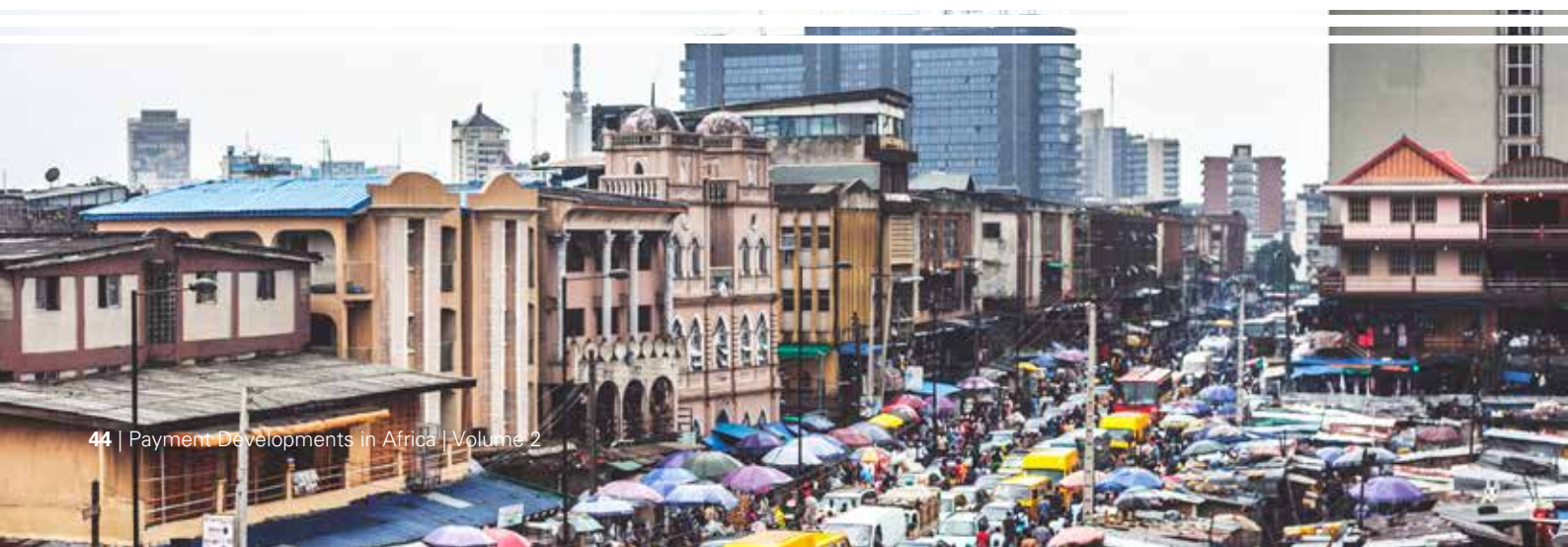
SICA-UEMOA activities started gradually in different countries from 2005 and was fully implemented in 2008 with the launch of the regional system. The system has seen good progress in WAEMU countries and in its regional operations. At the end of 2014, overall exchange volume was up 10.28 percent to 11,247,981 transactions compared to a year earlier. Activity increased across the region (by 95.41 percent) and in most countries, particularly Cote d'Ivoire (14.24 percent) and Guinea Bissau (21.06 percent).

Volume and value of SICA-UEMOA transactions (2013 v 2014)

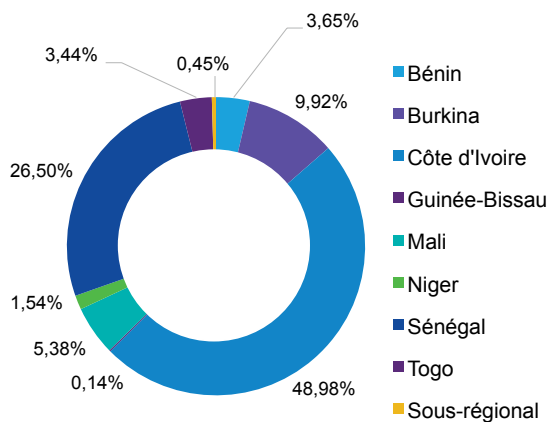
Country	Volume			Value		
	2013	2014	Variation	2013	2014	Variation
Benin	403,277	411,047	1,93%	2,204	2,308	4.70%
Burkina Faso	1,018,285	1,115,354	9,53%	3,961	4,202	6.08%
Côte d'Ivoire	4,822,059	5,508,806	14,24%	13,647	15,827	15.97%
Guinea Bissau	13,216	15,999	21,06%	55	68	22.69%
Mali	545,907	605,068	10,84%	3,210	3,501	9.07%
Niger	165,268	172,704	4,50%	943	990	4.97%
Senegal	2,831,789	2,980,823	5,26%	8,012	8,475	5.77%
Togo	373,667	386,905	3,54%	1,539	1,568	1.88%
Sub régional	26,240	51,275	95,41%	205	288	40.20%
Total WAMU	10,199,708	11,247,981	10.28%	33,777	37,225	10.21%

Sources: BCEAO, Annual Report 2014

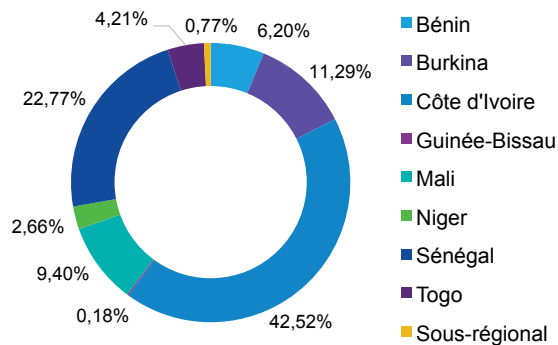
Trade value also increased from CFA33, 777 billion in 2013 to CFA37,225 billion in 2014, a rise of 10.21 percent. Again, these increases were most pronounced at the regional level (40.20 percent), in Cote d'Ivoire (15.97 percent) and Guinea Bissau (22.69 percent).



Relative share of compensation systems in the volume of trade in 2014



Relative share of compensation systems in the value of trade in 2014



Sources: BCEAO, Annual Report 2014

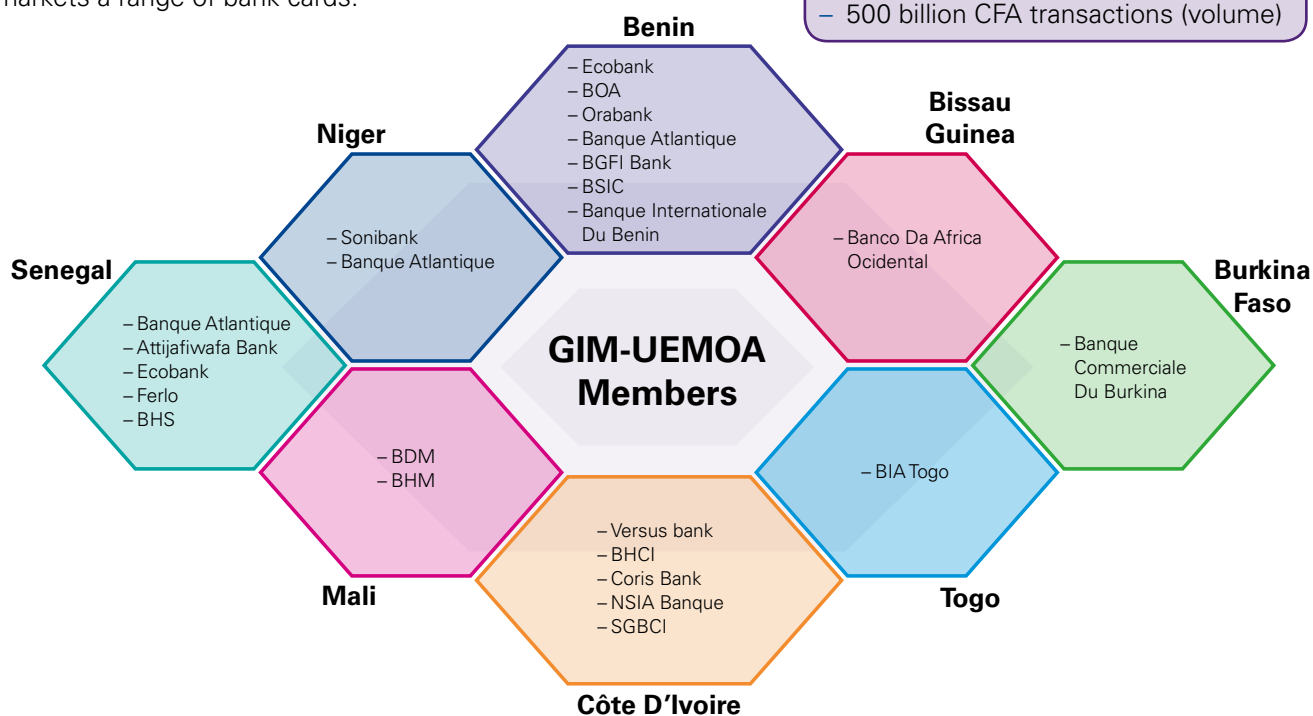
However, despite these gains, regional transactions in SICA-UEMOA remain relatively low and represent less than 1 percent of the overall volume of WAEMU transactions. Further analysis also notes that activity is largely concentrated in Cote d'Ivoire (which represents 42.5 percent of the total trade volume and 49 percent of transactions), followed by Senegal (representing 26.5 percent of the volume and 22.7 percent of the value). Combined with Burkina Faso and Mali, these four countries represented more than 90 percent of the total volume of SICA-UEMOA in 2014.

GIM-UEMOA: The Interbank Electronic Payments Group

Created in 2003 as an initiative to modernise payments and create a Regional Switch, the GIM-UEMOA is an Economic Interest Group that includes more than 100 banks and financial institutions across the region and allows access to a network of more than 3,500 ATMs and 2,500 point of sale (POS) devices across the WAEMU zone. GIM-UEMOA also markets a range of bank cards.

WAEMU Key Figures in 2015

- 8 countries
- +100 banks and financial institutions interconnected
- +3 500 000 cards
- +2 500 POS
- +3 500 ATMs
- 6 million transactions
- 500 billion CFA transactions (volume)



In December 2011, GIM-UEMOA launched GIM Mobile, an initiative to create a mobile switch and banking payment processor by linking GIM-UEMOA cards to the GIM Mobile platform. For now, only banks, institutions, non-bank financial institutions and electronic money issuers (EMEI's) approved by the BCEAO are allowed to be members of GIM, meaning that mobile operators cannot currently connect to the GIM Mobile platform.

It is worth noting that GIM Mobile does not operate its own network of agents, but rather allows for the mutual sharing of existing networks of agents between different banks, microfinance institutions (MFI's) and partners in general. GIM Mobile is also not an electronic money issuer.



Mobile money: A growing sector

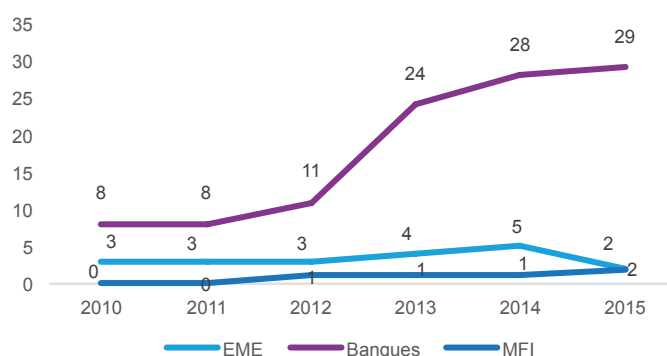
Mobile money has made significant progress across WAEMU, largely supported by flexible electronic money regulation that was adopted in 2006 and then updated in 2015. By September 2015, there had been 33 mobile financial services deployments in the region, representing around a quarter of the total mobile offers available in Africa.

The BCEAO authorises two types of models for the issuance of electronic money: the 'banking model' and 'non-banking model'.

In the banking model, electronic money issuance is the responsibility of a bank or a microfinance institution, possibly in partnership with a technical operator.

The non-banking model is implemented as a license for a non-bank institution (called an Etablissement de Monnaie Electronique or EME) for the issuance of electronic money.

Mobile financial services deployment trend in the region (2010 – Q3 2015)



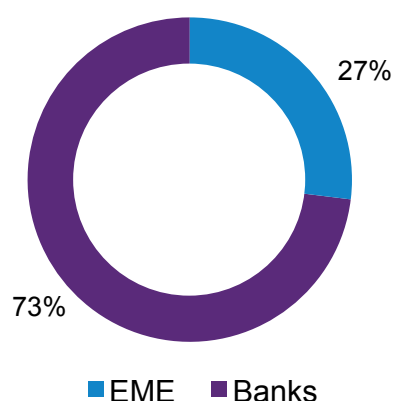
Source: BCEAO Annual Report 2015

The market has seen considerable change over the past five years, perhaps best illustrated by the positioning of Orange Group in the region. Originally set up as a partnership with BNP Paribas (and, to a lesser degree Bank of Africa in Niger), Orange Group leveraged the network of branches and growing concerns from users about security risks to build its money transfer and mobile payments business. Orange Group quickly became the market leader with 38 percent market share.

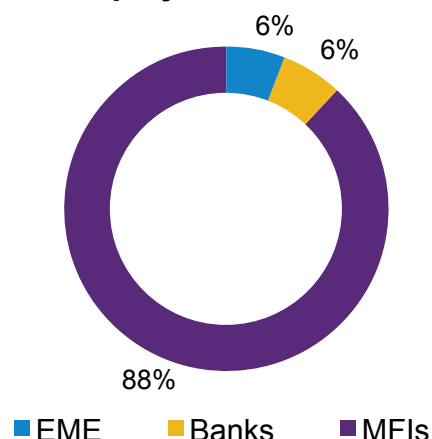
However, with the introduction of the non-bank model, Orange Group recently launched a new strategy that will end its partnerships with the banks and create a network of independent branches dedicated to electronic money. Orange submitted EME licence applications in Senegal, Mali and Cote d'Ivoire in June 2015 and the Senegal affiliate was approved in December 2015.

The vast majority – 29 of the 33 initiatives – are structured as partnerships between banks and telecommunications operators. The other four initiatives are led by two microfinance institutions (**MFI's**) and two **EME** licence holders within the Union. Major banks participating in this space include BNP Paribas, Nsia Bank, Ecobank, Societe Generale, Atlantic Bank and Bank of Africa.

Distribution of mobile financial service players as at 2010



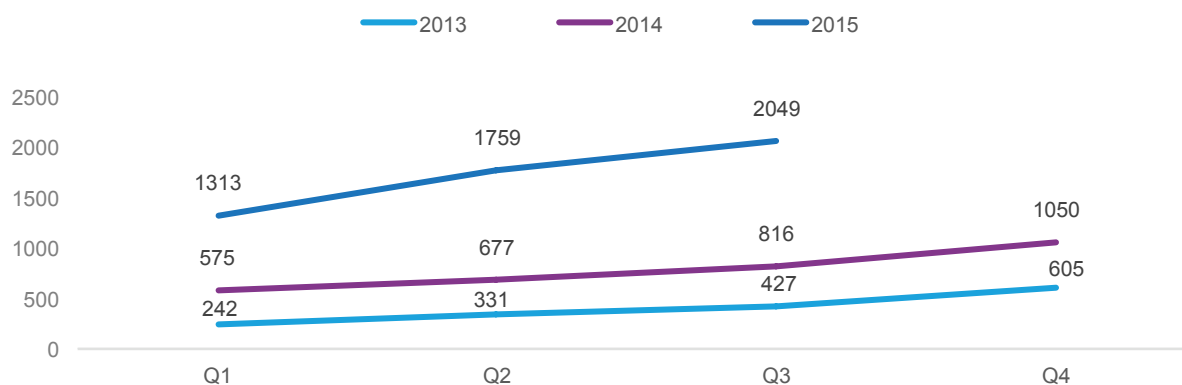
Distribution of mobile financial service players as at Q3 2015



Volumes and value are also increasing. Indeed, as of September 2015, the annual volume of mobile money transactions had reached 346.9 million (an increase of 33 percent compared to the end of 2014).

Annual value had also increased by 36 percent in the same timeframe (2010 to 2015). Average daily transaction value also increased from CFA8.6 billion per day at the end of 2014, to CFA18.96 billion by September 2015. The number of daily transactions rose from 710,242 to 1,260,575 in the same timeframe.

**Quarterly trend of mobile money transaction values for the BCEAO region
(in billions CFA)**



Overall, however, innovation in the delivery of financial services via mobile phone remains slow in the region, particularly when compared to the more sophisticated financial products (such as micro-credit and micro-insurance) found in East Africa. Likely as a result of ongoing struggles by operators to keep their customers engaged. The number of 'inactive' subscribers rose from around 40 percent in 2014 to 69 percent by September 2015.

Mobile money activity is largely concentrated in three markets – Cote d'Ivoire, Mali and Burkina Faso which, together, account for 84.56 percent of trading volume and 90.54 percent of total transaction value. This is down slightly from 2014 when they accounted for 86 percent of volume and 91.3 percent of value.

Data suggests that other markets are seeing mixed growth, however. Niger, for example, saw volumes rise from 14.6 million transactions to 19 million in September 2015 while value grew from CFA108 billion to CFA149 billion.

Senegal, on the other hand, saw volumes flatten from 18.8 million transactions in 2014 to 18 million by September 2015 and value of transactions fall from CFA192 billion in 2014 to CFA152 billion in mid-2015. This is, in large part, due to the dynamic alternative rapid money transfer service in Senegal which is creating competition despite Senegal enjoying the fourth largest subscriber network with 2.1 million people.

Cote d'Ivoire boasts the largest subscriber network with 9.8 million people, followed by Mali (2.7 million) and Benin (2.3 million). Transaction volumes are low in Guinea-Bissau and Togo where mobile financial services represent around 1 percent of volume and 2 percent of total transaction value.

Ongoing developments and challenges: A look ahead

As the market rapidly evolves and new players – particularly telecommunications operators – become involved in the provision of financial services, the Central Bank conducted a review of the supervisory and monitoring framework based on new international requirements.

With a main focus on enhancing user protection, the Central Bank is also working to raise awareness within national treasury departments and community financing institutions to ensure they take on a more active role in WAEMU's payment systems. The public treasury departments of Benin, Burkina Faso and Mali are direct participants in SICA-UEMOA and Cote d'Ivoire's public treasury is connected.

Despite significant action on the part of the Central Bank, the integration of African payment systems has generally lagged that of the rest of the world. However, there are significant opportunities for the region to leapfrog some of the payment developments seen in other parts of the world through the appropriate enabling frameworks to drive adoption of innovative payment solutions.

We believe that, for Africa and WAEMU to become a real force in the expanding global economy, consumers, small and medium-sized enterprises and large corporations alike must be able to make payments efficiently and safely. It is critical, therefore, that African governments improve their payment systems' capabilities to enhance domestic, regional and international trade.

Key challenges include:

- The cost of payment services
- The need to **continually reinforce** payment systems **security**
- **Partnerships** between the different e-money actors are still **relatively poor**
- **Low awareness** within the overall population about new payment services available.



5



Bridging the Great Divide

As Africa's governments and Central Banks seek to improve financial inclusion and drive in-bound investment, new and exciting opportunities are emerging for both traditional banks and FinTech start-ups. In this article, we explore the evolving FinTech market and identify opportunities for Africa's governments to leverage technology in order to finally bridge the great divide.

Overcoming challenges and creating opportunities

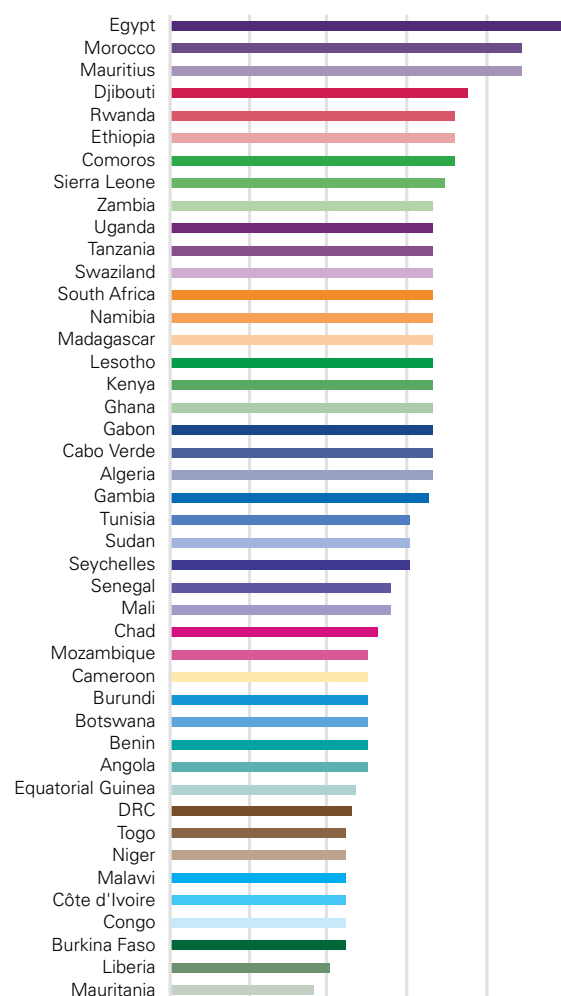
Africa's economies, financial service sectors and payment systems face some massive challenges. Throughout this report, we've highlighted some of the big concerns facing WAEMA, Ghana and Tanzania. Many of their challenges are common across the continent: low levels of financial inclusion and financial literacy, poor or outdated telecommunications and banking infrastructure, security risks and concerns regarding system resilience, and inconsistent regulatory approaches and regimes, to name but a few.

However, most big challenges also create big opportunities. And this is no different.

New electronic and mobile payment options – combined with innovative ideas from FinTech start-ups – are creating a massive opportunity for Africa's governments, banks and regulators to deliver a truly safe, secure, convenient and efficient payment environment for the benefit of all their citizens and potential customers.

Yet, getting there will not be easy. It will require participants – regulators, banks, MNOs, FinTechs and others – to find the right balance between serving the needs of the people, expanding the payment system and mitigating risk. Finding this balance is critical to ensuring sustainable growth and reach of the payment system.

Rural financial service development index 2015 (0 = underdeveloped, 100 = highly developed)



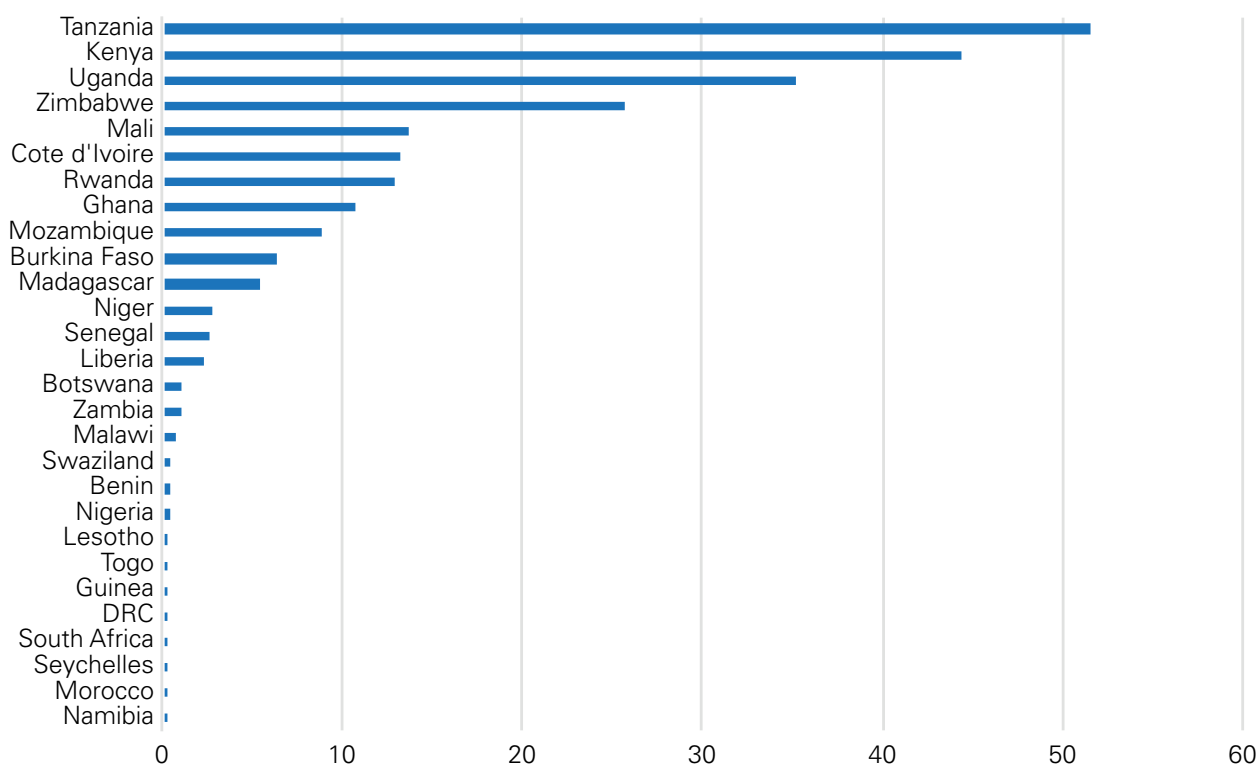
The vast benefits of inclusion

Clearly, the greatest challenge facing Africa today is that too few people have access to financial services. According to the Bank of International Settlements, only around 5 percent of Sub-Sahara's population were 'included' in the traditional banking system in 2014.

In the case study on Angola in this article, we explore some of the common challenges facing Africa's governments as they strive to improve financial inclusion such as weak rural penetration of banking infrastructure, low service quality levels and a lack of proper documentation for new customers.

The reality, however, is that significant sums of money are being transferred across the continent, just not through traditional banking channels. According to the International Fund for Agriculture Development (IFAD) latest stats, around US\$40 billion worth of remittances flow into and across the continent each year. And around three-quarters of these funds are transferred through informal channels. As a result, the World Bank suggests that any data on remittances is likely an underestimation.

Mobile money transactions, 2014 (% of GDP)



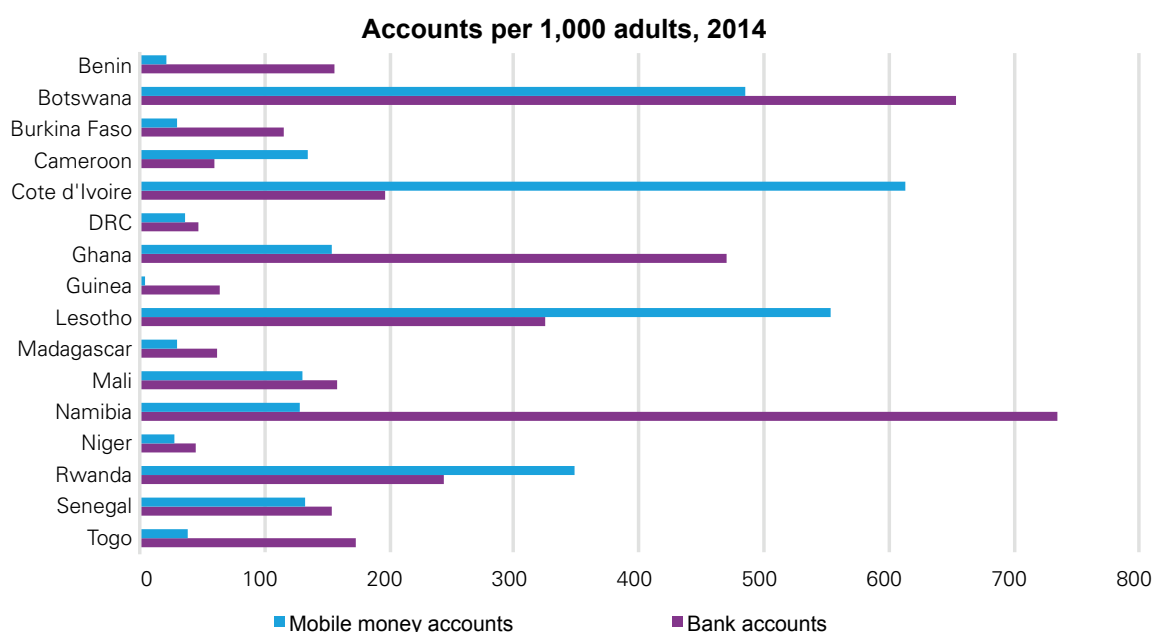
Source: International Monetary Fund (IMF)

Bringing supply and demand into balance

In business terms, the current situation is one where demand for financial services far outstrips supply. And this creates valuable opportunities for banks and non-bank financial institutions.

Indeed, those that are able to leverage new technologies to improve the way financial services are delivered to the underserved populations of Africa will enjoy significant competitive advantages.

In part, the problem is that Africa's banking services have traditionally been very 'supply' driven with banks introducing new channels and products that are then promoted to those within reach. And in many cases, this has not delivered the desired results. ATMs, for example, were introduced by banks to reduce transaction costs and improve service times for customers. [But in the low-income rural markets, the lack of telecommunications infrastructure and high cost of delivering services means that financial services remain too expensive for most rural populations.](#)



Source: World Bank

This has created massive opportunity for so-called FinTechs, who are very much demand-driven. Most FinTech ideas (both in Africa and around the world) are born out of specific customer complaints and emerging customer demands that are not being satisfied through traditional banking and payment channels. Mobile banking is the clearest example of this: as the number of mobile devices rose on the continent (there were almost a billion by 2016), demand for mobile banking has skyrocketed and – for the most part – it has been the FinTechs and non-banking financial institutions that have answered the call.

Understanding the FinTech opportunity

It is becoming increasingly clear that FinTechs may hold the key to bridging the great divide and driving financial inclusion in Africa. And all signs suggest that – across the continent and globally – investment into FinTech is starting to heat up.

[Indeed, after suffering a significant drop off in global investment in the fourth quarter of 2015, FinTech companies rebounded back to life at the start of 2016, buoyed by a number of investments valued at more than US\\$100 million. The scope of FinTech investment has also broadened beyond the traditional payment and lending space with investors increasingly focussed on new areas such as robo-advising and robo-investing.](#)

The past few quarters have also brought continued collaboration between the FinTech sector and corporate players, with an increasing number of banks, financial institutions and insurance companies forging partnerships with FinTech companies, accelerators and incubators in order to drive innovation within their own organisations.

Africa FinTech

Opportunity

80% of Africans don't have access to formal financial services (e.g. bank account) but by 2020 Africa will have **500 million** smart phones.



Mobile Wallet

183 million people in Africa own a mobile wallet:

- **3 times** more than the US
- Expanding **3 times** faster than the US



Funding raised

30% of the total funding raised by African tech businesses in 2015 was raised by **FinTech start-ups**.



Competition

FinTech companies entering the African market face some complexity but virtually **no market competition**, and more than a **billion people** can be reached.



Partnering for success

Clearly, a significant part of the solution will come from improving these partnerships between banks and non-bank financial institutions. Consider, for example, the successes of the M-Shwari partnership in Kenya. Launched in 2002 as a strategic partnership between the Commercial Bank of Africa (CBA) and Safaricom – Kenya’s leading mobile telecoms provider – M-Shwari is essentially a bank account that can only be accessed through the mobile payment system M-Pesa. Today, more than one in five Kenyan adults is an active M-Shwari customer.

M-Shwari works by allowing the bank to leverage the existing ‘know-your-customer’ (KYC) details collected by Safaricom during the registration of its mobile phone customers. Upon application, the data is checked against Kenya’s well-functioning national identification document (ID) system and – if the data matches up – an M-Shwari account is opened. The entire process usually takes less than a minute.

For consumers, the biggest appeal of the service besides convenience has been access to credit; even if new customers have no banking history at all, they can immediately apply for credit. Between November 2012 and April 2015, CBA disbursed 20.6 million loans worth US\$277 million to 2.8 million unique borrowers – equalling an average loan of US\$15.

The double regulation debate

What makes M-Shwari noteworthy is that it has enjoyed its success despite the fact that it is essentially ‘double regulated’, needing to comply with both banking and telecommunications legislation. This not only adds a significant barrier to entry and compliance burden for new players, it also creates challenges for consumers.

Telecommunications regulations in Kenya require that telecommunications companies provide customers with clear Terms and Conditions (T&Cs) that specify how their data will be shared and used by the partnership. But these T&Cs can only be read on the internet. In Kenya, most adults do not have access to the internet via mobile phones, so most account holders accept the T&Cs without reading them. A 2015 report by the Consultative Group to Assist the Poor (CGAP) casts concerns about the sustainability and morality of this approach once other players enter the market with less stringent T&Cs and weaker credit scoring algorithms for determining creditworthiness.

Even within financial services regulations, significant barriers to entry remain for new players and non-bank financial institutions. Indeed, ever since the Global Financial Crisis, banks have faced increasingly tight regulatory regimes. At the same time, scrutiny has increased tremendously, with the media salivating at the opportunity to report on the billion-dollar fines being levied against financial institutions. Few non-bank financial institutions have the capabilities to manage.

Understanding FinTech

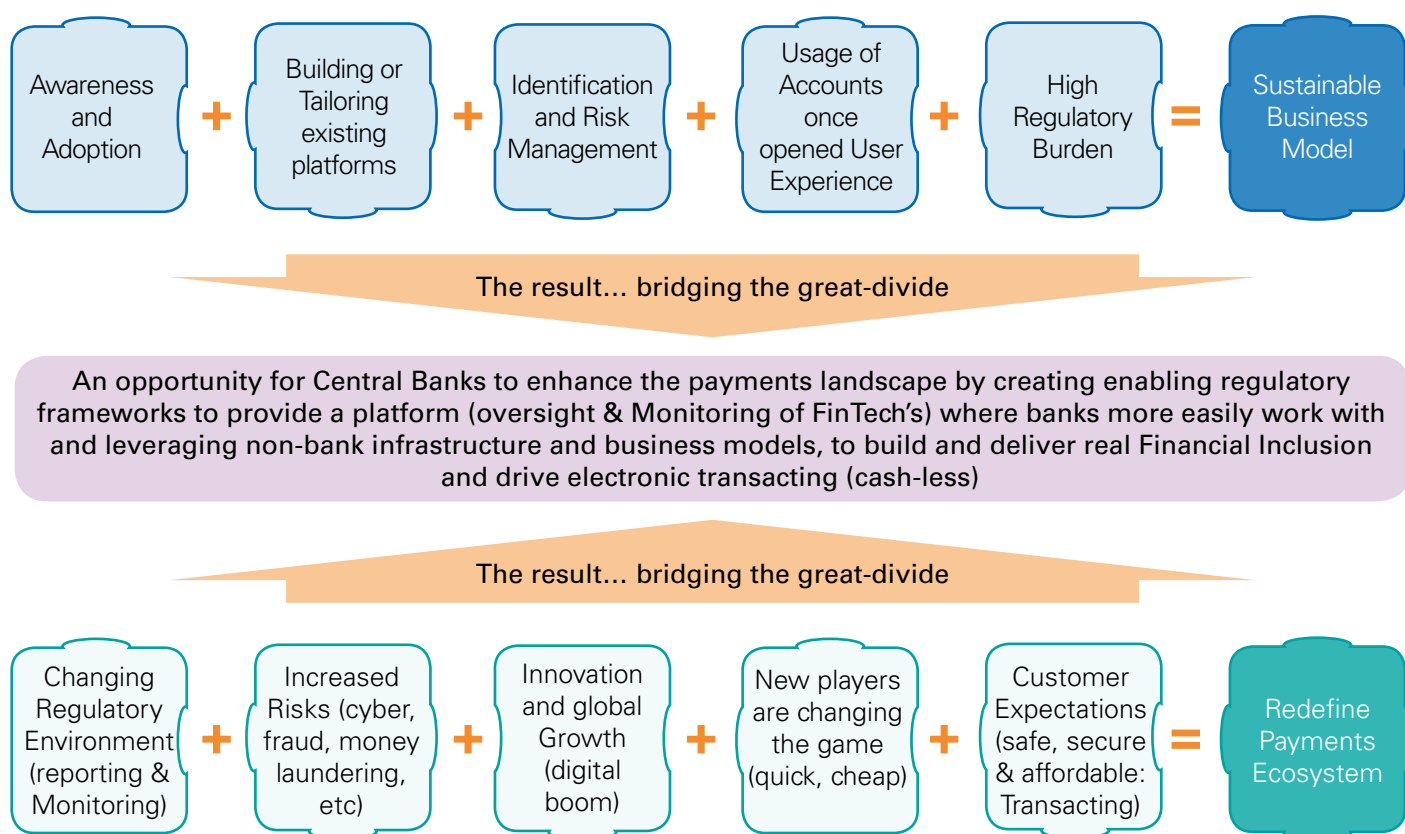
FinTech can be used to describe a wide variety of companies, business models and technologies. Currently, FinTechs tend to fall into one of eight key verticals:

- **Lending:** Primarily dominated by peer-to-peer lending platforms, lending technologies often focus on using machine learning technologies and algorithms to assess creditworthiness.
- **Payments and billing:** From solutions aimed at facilitating payment processing through to subscription billing software, these technologies focus on simplifying and mobilising payment and billing.
- **Personal finance and wealth management:** These technologies help individuals manage their finances (such as personal bills, savings and credit accounts) and their personal assets and investments.
- **Money transfer and remittances:** This sector is also largely dominated by peer-to-peer platforms and solutions aimed at facilitating the flow of money between individuals in different countries.
- **Blockchain:** An emerging area of FinTech, this technology is centred around a distributed ledger concept that improves security, reliability and freshness of customer data.
- **Institutional and Capital Markets:** From alternate trading systems to financial modelling and analysis software, these technologies are targeted to hedge funds, mutual funds and other institutional investors.
- **Crowd-funding:** These platforms enable projects or companies to raise equity from individuals through a peer-to-peer investment platform.
- **InsuranceTech:** These companies focus on harnessing new technologies such as machine learning and cognitive computing to improve the way insurance is manufactured, sold and managed.

Balancing along the divide

The challenge, therefore, is for regulators and regulations to take into account the opportunities and challenges presented by both traditional financial institutions and technology-driven non-bank financial institutions when setting and reforming financial service regulations. In most cases, this will require a fundamental reshaping of the regulatory ecosystem.

There are a number of ways that FinTechs and banks could work together to help solve the continent's financial inclusion challenges. But this cooperation will require a balanced regulatory framework that not only protects the safety and security of the National Payments System, but also encourages innovation from FinTechs, banks and others to create and deliver new payment mechanisms to those that had previously been excluded.



How FinTechs could help solve Financial Inclusion Challenges

Banks are looking to redefine the payment services, to clients, by engaging these new FinTech players and expand their retail payments offerings

This, in turn, will require the different regulators – banking, government, telecommunications, conduct and others – to cooperate more closely in order to grow the number of active participants in the economy. It will also require far stronger relationships between electricity suppliers, telecommunication suppliers and the Central Banks who are spearheading the transformation to electronic payment mechanisms.

The banking sector could also be doing more. More interoperability and innovation. More customer channels and solutions. And more partnerships across the various sectors. M-Shwari's experience shows that barriers such as lack of sufficient KYC data could be overcome with smart new approaches and collaboration across organisations. Given that just 10 percent of African adults are listed with a credit bureau (and two-thirds of these are located in just four countries), overcoming this challenge will be key.

Creating positive disruption

In the meantime, regulators should be looking for opportunities to inspire change within their current framework. In Ghana, for example, the Central Bank issued its e-Money Issuer and Agent Guidelines in 2015, aimed at creating an enabling regulatory environment for non-cash retail payment and funds transfer mechanisms.

What makes these Guidelines particularly notable is that the authorities made a distinction between financial institutions regulated under the Banking Act and non-bank entities engaged solely in the business of e-money and other regulated and related activities. [This opens the door for enterprises focussed on e-money to enter the financial services market legally without having to comply with all the bank-related regulations set out by the Banking Act.](#)

What is clear from this report is that market participants and regulatory authorities in African countries now have the opportunity to leverage the growth in FinTech technologies and solutions to create an inclusive next-generation National Payment System that serves the needs of all stakeholders. However, the focus must be on ensuring that innovation is disruptive in a positive way.

In the 1940s, economist Joseph Schumpeter coined the term 'creative destruction' to describe the positive product and process innovation that allows new products and series to replace outdated ones. This kind of positive disruption is important to the development of National Payment Systems but also needs to be handled with caution in order to bridge the great divide.



Case Study: Angola

Angola faces a set of challenges that are driving the Central Bank to develop a financial education program. These challenges include:

- Low penetration of bank branches into the country's inland areas
- A lack of appropriate service levels from bank employees due to poor training
- A large population without adequate documentation
- A variety of national languages.

In 2009, the Angola National Bank (the Central Bank of Angola), launched a new program of financial inclusion that aims to facilitate the access and knowledge of low-income populations to financial services. The program is expected to last through to 2017.

VISION

To increase the population's level of financial knowledge through the adoption of appropriate financial behaviours in order to ensure the well-being of Angola's population and the stability of its financial system.

MISSION

To promote a banking sector that is available to all Angolan citizens through a regulatory environment that supports the development and offering of products and services that are compatible with Angolan financial needs and safeguard consumers' financial interests.

TARGET

The general population, the unbanked population, students and workers.

What are the program's goals?

- Increase the population's understanding of the basic concepts of banking activity
- Increase citizen's ability to choose and manage their own resources to stimulate family savings
- Educate the population on consumers' banking rights and duties
- Disseminate information to help the population identify potentially fraudulent activities or practices harmful to the financial interest
- Promote the banking sector as a secure alternative to traditional methods for safekeeping money, building savings, securing financing and purchasing investments
- Encourage the population to make suitable choices regarding their savings in order to achieve remuneration and risk levels suitable to consumer profiles
- Increase the banking rate within the general population
- Reduce social disparity.

The implementation of Angola's financial education program is supported in three main ways: through partnerships with banks, through the development of special products and by leveraging non-traditional channels to reach the low-income population.

Partnerships



- The program creates a 'subscription agreement' with many of the top banks to encourage the creation of simplified bank accounts with low opening balance requirements.
- The Angolan National Bank also partnered with the Angolan Bank Association, NGOs and the National Consumer Protection Institute.

Products



- Time deposit with a minimum opening amount of Kz100; can be moved without previous notification without penalty; interest calculated on a daily basis and capitalised monthly.
- Demand deposit with a minimum opening amount of Kz100; can be opened with an alternate form of identification; no maintenance fees or debit card costs.

Channels



- Use of channels that reach the target audience such as posters at municipal and informal markets, flyers in comic books, advertisements on TV and radio, community theatre and interventions on TV and radio shows.

All data suggests that the financial inclusion program made significant progress in the first half of its mandate. However, there is a strong focus on taking new steps to drive continued benefits from the program. These include:

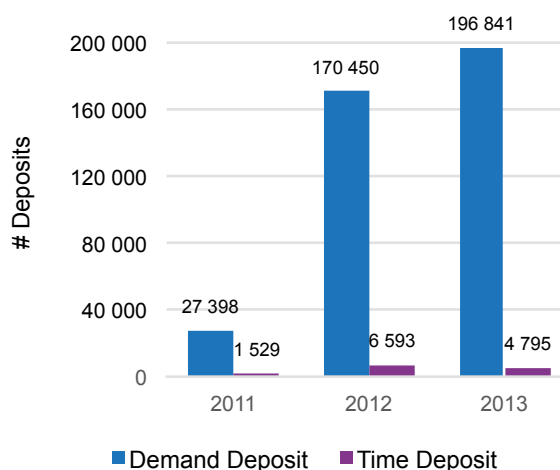
The promotion of financial vehicles such as Bank Correspondents

- The promotion of microcredit to stimulate entrepreneurship national education curriculum
- The development of a Financial Inclusion Index to measure progress across several key indicators

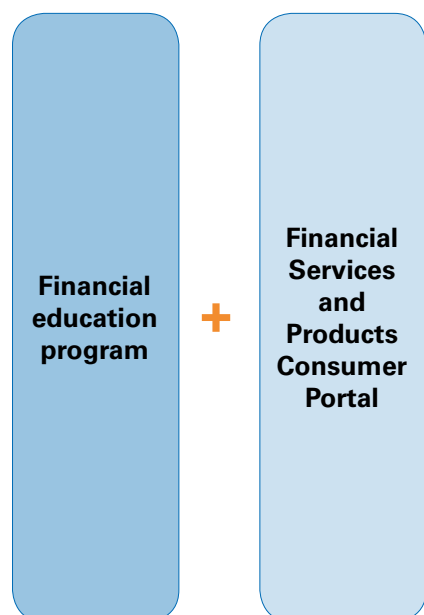
Continued outreach to schools, institutes, churches, markets, national defence bodies and others.

To compliment the financial education program, Angola's Central Bank also launched a new initiative in 2012 to help inform the public about the banking sector, products and services and customer rights.

**Program's results
(2011 – 2013)**



Financial Inclusion Tools



What are the Portal's goals?

Educate the public on banking products and services (such as cards, cheques, deposits, credit, microcredit, home banking and mobile banking)

Inform the population on financial consumer rights

Provide information on financial institutions operating in Angola

Advise on security and fraud prevention, particularly related to cards, cheques and home banking

Provide financial training related to the financial system, monetary purpose and inflation

What role are FinTechs playing in Angola's financial education program? Some are supporting traditional banks as they move to offer mobile banking. Current offerings are mostly focussed on enabling customers to perform simple operations such as managing money, transferring money to other accounts and transaction information. *The priority has largely been on strengthening the proximity strategy with customers by allowing agile access to mobile platforms that deliver home banking functionality.*

There are also a number of innovative solutions emerging that provide mobile payment services supported by mobile phones and electronic money. E-Kwanza, for example, allows transfers and payments within Angola, but users need to register their accounts with a BAI agent before activating it. Transferring physical currency into electronic money (and vice-versa) can be done at BAI branches and security and compliance with financial transaction regulation is provided by BAI.



6



Latest Regulatory Developments in Payments for Nigeria, South Africa and Kenya

In our first edition of *Payment Developments in Africa*, we explored the payment regulation in three key markets: Kenya, Nigeria and South Africa. In this chapter, we provide readers with an update on the latest regulatory, sector and market developments in these countries.

Nigeria

- **Reducing the risk of platform failure:** In September 2016, Nigeria's regulator issued the Circular on the Prevention of Exposures to Banks Through Payment Solutions in response to a growing exposure of banks to payments solution service providers' platforms. The circular details measures to curtail exposure due to operational failures.
- **New e-payment guidelines released:** In May 2016, new Guidelines on Operations of Electronic Payment Channels in Nigeria were issued. The Guidelines cover:
 - **ATMs:** Minimum standards for ATM operations, security, dispute resolution, regulatory monitoring
 - **PoS:** Minimum standards and requirements for the operation of PoS & acceptance devices, roles and responsibilities of different stakeholders, fees & charges
 - **mPoS:** Minimum standards and requirements for the operation of mPoS, roles & responsibilities of stakeholders, settlement mechanism, fees & charges
 - **Web Acceptance Services:** Minimum standards and requirements for the processing of transactions via the web (internet) channel, safety, roles & responsibilities of stakeholders, settlement mechanism, fees, and compliance
- **Clarity provided on switching services:** Also in May 2016, new guidelines were created to set out the procedures for the operation of switching services in Nigeria, including the rights and obligations of the parties to the switching contract. It also compels the switching company to meet the minimum standards for switching as approved by the CBN. It covers licensing, parties to transaction switching, rights and responsibilities, technical requirements and operational rules and procedures.
- **A mobile payments monitoring system emerges:** In November 2015, the government issued the Circular on the Implementation of the Global Mobile Payments Monitoring & Regulation System which details modalities for a global mobile payments monitoring and regulation system. This system was deployed to provide effective surveillance of mobile money operators and their transactions, in large part to help improve fraud management on mobile money platforms.
- **International mobile money remittance guidelines issued:** Also in November 2015, the Guidelines on International Mobile Money Remittance Service (IMMRS) in Nigeria were issued. The guidelines cover a number of areas including the operations of IMMRS, the authority required to provide IMMRS, business rules, roles and responsibilities of participants, transaction security standards, infrastructure, risk management, Know Your Customer (KYC), customer due diligence, anti-money Laundering (AML), Countering the Financing of Terrorism (CFT) and consumer protection.

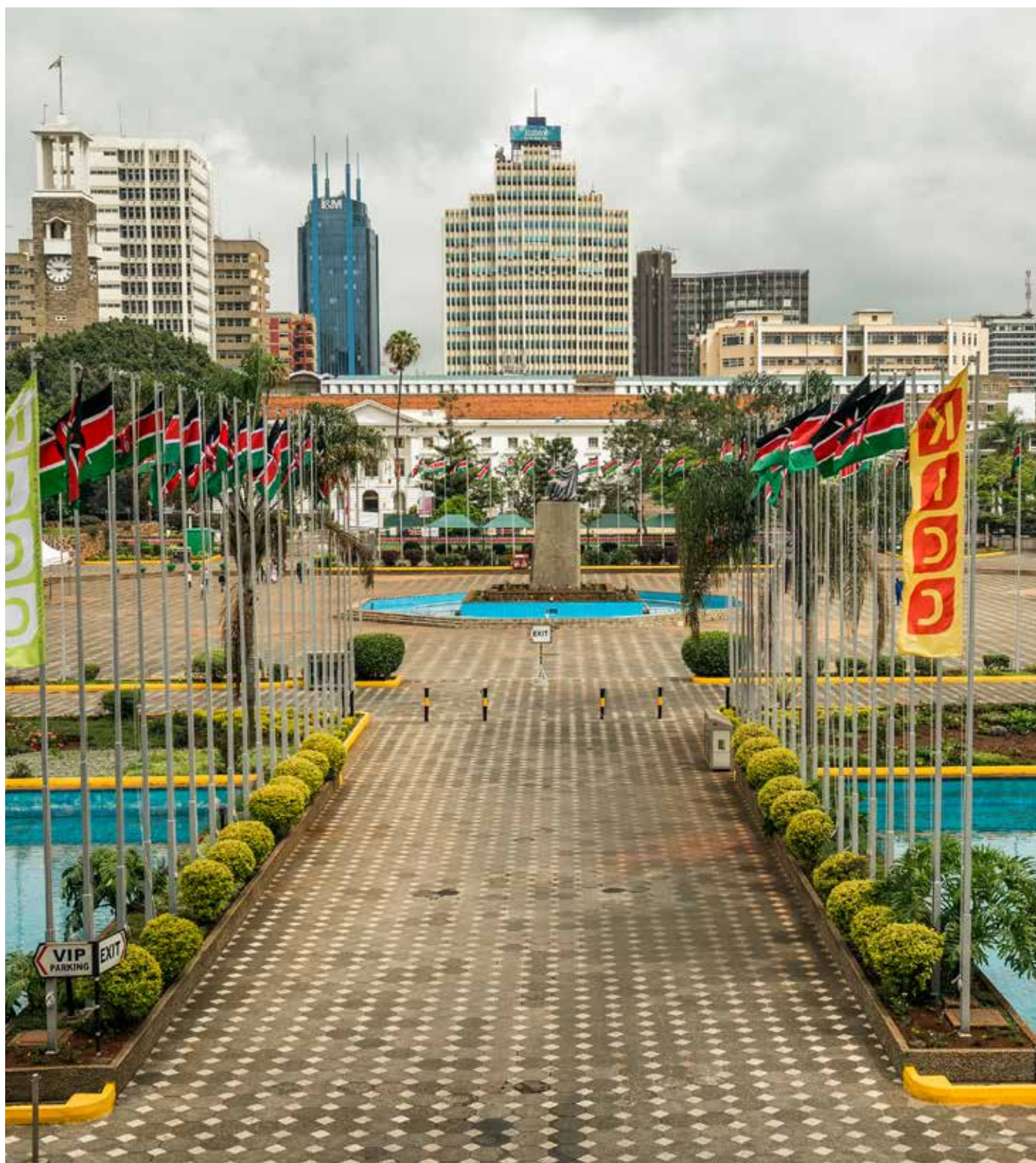
South Africa

- **New digital bank announced:** Discovery has announced its intentions to build the digital infrastructure for its new bank, which is expected to launch in the next two years. The bank aims to deliver an alternative to the traditional banking system.
- **Electronic authentication now required:** In 2006 the South African Reserve Bank legislated the implementation of “Early Debit Orders” for banks involved in the collection of payment instructions in the Early Debit Order (EDO) Payment Clearing Houses (PCHs). The resulting PCH Agreements created two EDO payment streams: authenticated EDOs and non-authenticated EDOs. As of October 2016, all non-authenticated EDOs are required to be authenticated electronically. Those with existing non-authenticated EDO mandates have until June 30, 2017 to comply.
- **New JSE Derivatives Rules for comment:** Amendments to the Johannesburg Stock Exchange (JSE) Derivatives Rules have been published on the official website of financial services board (www.fsb.co.za) for public comment. All interested persons are called upon to lodge their registrations.
- **FSB seeks information from insurers:** The Financial Services Board (FSB) issued two documents related to the Short-term and Long-term Insurance Acts: a request for information on new and existing third-party cell captive insurance business, and a request for information on binder functions and binder fees. The FSB also issued a ‘Standing Approval’ for the issuance of shares by, or a change in capital structure of, cell captive insurers.
- **Clarification for debt counsellors provided:** The National Credit Regulator reminded all registered Debt Counsellors of the regulator’s stance on issues such as practicing with a lapsed registration and allowing unregistered persons to act as Debt Counsellors on their behalf. The NCR also clarified that Debt Counsellors are seen as ‘natural persons’ and are therefore responsible for their own clients. Contracts between companies and Debt Counsellors that state that the client is the ‘property’ of the company should therefore be avoided.
- **Enforcement actions taken:** The FSB handed out two fines to financial services companies recently. A life insurer was fined SAR200,000 for cancelling funeral insurance business group schemes without informing either the Registrar of Long-term Insurance or the policyholders of the cancellations. Also, an investment services provider received a SAR10,000 penalty for contravening the Collective Investment Schemes Act. The company has now performed an audit to ensure compliance with applicable legislation.



Kenya

- **New guidelines for large OTC transactions:** In January 2016, the Central Bank of Kenya issued additional guidelines on large transactions processed over the counter. Customers are now required to complete forms explaining the nature of any large cash transactions amounting to KES1 million (USD10,000) and above.



7



Conclusion, Acknowledgements and References

Conclusion

We have come to an end of our Africa Payment Developments 2nd edition. As an extension of our Volume 1, where we had looked at some of the key payment developments and trends in Kenya, Nigeria and South Africa, we have expanded in this issue the view of new territories such as Ghana and Tanzania, and an overview of the well-established BCEAO Regional system.

In this edition, KPMG have illustrated that 'disruptors' are shaping the next industry evolution across the payments value chain, which supports the views shared in our 1st edition. In the country features, FinTech has been the focus and will be for some time to come, shaping the next industry evolution and, as customer demands become more focused on the "app of everything," moving away from cash and cheque towards electronic. One of the challenge for payment service providers (banks and non-banks) would be utilising digital capturing and authentication of payer at point of transacting. In this edition, we have also illustrated some latest trends, developments, challenges and opportunities that will shape the next wave of "things to come" in the African payments landscape.

The feature article, Bridging the Great Divide, we explored the evolving FinTech market, the exponential growth in the value of investment into FinTech companies and highlighted some opportunities for Africa's governments to leverage technology to drive real financial inclusion, in order to finally bridge the great divide.

We leave space for further upcoming thought leadership pieces on Payments Developments and our views on how other regional groupings could start integrating holistic standards and approaches, to leverage regional payment systems for the growth of intra-Africa Trade.

Payments – moving Africa towards becoming a power-house in the global economy.

KPMG will continue to monitor and provide the latest thought leadership and guidance to our clients in order for them to take advantage of the changing face of payments.

Acknowledgements

This edition of Payment Developments in Africa draws from the extensive experience and insight of KPMG's network of financial services and payments professionals. Their years of experience, extensive hands-on experience and practical advice were invaluable in developing this report.

In particular, the authors of this report would like to thank the KPMG Africa Payments network, the KPMG Global Payments network and the KPMG Africa Economics team (Christie Viljoen and Lullu Krugel) for their support and contributions to this publication. Special recognition also goes to Joleen Young and her support team (Jelena Kucan Salic, Africa High Growth Markets) as well as KPMG West (Samuel Aluko, Francis Donkoh), East (Patrick Kipsang), Francophone (Marcel Kopoin and Thierry Colatrella) and BCEAO region experts who added valuable in-country insights.

A promotional banner for the KPMG Africa Business Guide. On the left is the KPMG logo and the text 'AFRICA BUSINESS GUIDE'. In the center, it says 'Your direct guide to business in Africa' followed by 'Access up-to date country profiles, market insights and expert advice.' Below this, it states 'Available for android and iOS devices.' and shows the App Store and Google Play logos. On the right, there is a circular graphic with a map of Africa and the text 'Doing Business in Africa', and a smartphone displaying the app's interface.

References

Ghana

Bank of Ghana:

- http://www.bog.gov.gh/index.php?option=com_content&view=article&id=1720&Itemid=146
- <http://www.bog.gov.gh/privatecontent/Banking/The%20Payment%20System%20Landscape%20in%20Ghana.pdf>
- <http://www.bog.gov.gh/privatecontent/Banking/LEGAL%20AND%20REGULATORY%20FRAMEWORK.pdf>
- http://www.bog.gov.gh/index.php?option=com_content&view=article&id=102&Itemid=148
- <http://www.bog.gov.gh/privatecontent/Banking/NATIONAL%20PAYMENT%20SYSTEMS%20OVERSIGHT%20FRAMEWORKV1.1.pdf>
- <http://www.bog.gov.gh/privatecontent/Banking/PAYMENT%20SYSTEM%20STATISTICS.pdf>
- <http://www.bog.gov.gh/privatecontent/Banking/National%20Payments%20Strategy%20Final%20version.pdf>
- Modern Ghana, “GhIPSS, the vehicle to modernize Ghana’s payment system”, March 2, 2010
- Ghana News Agency, “GhIPSS supports two banking award categories”, May 19, 2015
- GhIPSS website (<http://www.ghipss.net>)
- Ghana News Agency, “GhIPSS to introduce instant Interbank payment system”, January 7, 2014
- Kofigah, Solomon Kwashie, “The challenges to its adoption in Ghana and what can be done to make it catch on”, Ashesi University College,
- Ericsson Consumer Insights Summary Report, “M-Commerce in Sub Saharan Africa”, August 2012 (<http://www.ericsson.com>)
- Ghana News Agency, “Local ATM card holders to enjoy new services via hybrid POS”, March 30, 2015
- AdomOnline, “ICH to facilitate Mobile Money transfers across networks – NCA”, April 15, 2015 (<http://Ghana-news.adomonline.com>)
- CSD website (<https://www.csd.com.gh>)
- Ghana Business Network, “MTN Ghana crosses 50% market share – CEO”, May 4, 2016 (<https://www.ghanabusinessnews.com/>)
- MPower website (<http://www.mpowerpayments.com>)
- ExpressPay website (<https://expresspaygh.com>)
- iPay website (<http://www.ipay.com.gh>)
- e-Payments website (<https://www.epay.gov.gh>)

Tanzania

- BOT, “Bank of Tanzania Annual Reports”, 2013 (<https://www.bot-tz.org/AboutBOT/BOTWebsite.asp>)
- Bank of International Settlements, “Payment System in Tanzania” (<https://www.bis.org/cpmi/paysys/tanzania.pdf>)
- BOT, “Bank of Tanzania: Payment System” (<https://www.bot-tz.org/PaymentSystem/paymentSystem.asp>)
- Business Monitor International, “BMI Research: Industry Research & Data” (<http://www.bmiresearch.com/>)
- BOT, “New Banking and Finance Regulations” (<http://www.mondaq.com/>)

- BOT, “Bank of Tanzania Annual report”, 2014 (<https://www.bot-tz.org/AboutBOT/BOTWebsite.asp>)
- USAID, “Tanzania Mobile Money Assessment and Case Study”, 2013”
- USAID, “Making the Journey From Cash to Electronic Payments” (USAID-NetHope-ePayment-Toolkit-pdf)
- Al-Zaytoonah University of Jordan, “The Prospects and Barriers of E-Commerce Implementation in Tanzania” (http://www.zuj.edu.jo/conferences/ICIT11/PaperList/Papers/E-Commerce/559_george_ali.pdf)
- Tanzania Online Payments Market (www.3gdirectpay.com)
- BOT, “Payment Systems in the Southern African Development Community” (www.bot-tz.org/PaymentSystem/Tanzania_NPS_Greenbook.pdf)

WAMU

- BCEAO, “Annual report on mobile financial services”, 2015 (<http://www.bceao.int>)
- BCEAO, “Annual report on mobile financial services”, 2014 (<http://www.bceao.int>)
- BCEAO, “Banking commission annual report”, 2014 (<http://www.bceao.int>)
- BCEAO, “Payment systems annual report”, 2014. (<http://www.bceao.int>)
- Investir en zone franc, “WAMU economic integration history”, 1996. (<http://www.izf.net>)
- Financial Afrik, “Interview with the CEO of GIM-UEMOA”, 2015 (<http://www.financialafrik.com>)
- International Monetary Fund, “IMF Country Report No. 15/101”, 2015 (<http://www.imf.org>)
- Bridging the Great Divide
- World Bank, “The WB-BIS General Principles for International Remittance Services: A global tool for a global goal”, November 2009 (<http://worldbank.org>)
- World Bank, “Migrant Remittances in Africa: An overview”, S. Mohapatra and D. Ratha (<http://worldbank.org>)
- Mail & Guardian Africa, “The 30m-strong Africa diaspora likely sends \$160bn home every year: Where does it go?”, June 2, 2105 (<http://www.mgafrica.com>)
- IFAD, “Sending money home to Africa: Remittance markets, enabling environment and prospects”, November 2009 (<http://www.ifad.org>)
- The MIT Press, “Creative destruction”, J. Schumpeterian (<http://education.mit.edu>)
- CGAP, “Top 10 things to know about M-Shwari”, April 2, 2015 (<http://www.cgap.org>)
- CGAP, “How M-Shwari Works: The story so far”, April 2, 2015 (<http://www.cgap.org>)
- Analyse Africa website (<https://www.analyseafrica.com>)
- IFAD website (<https://www.ifad.org>)

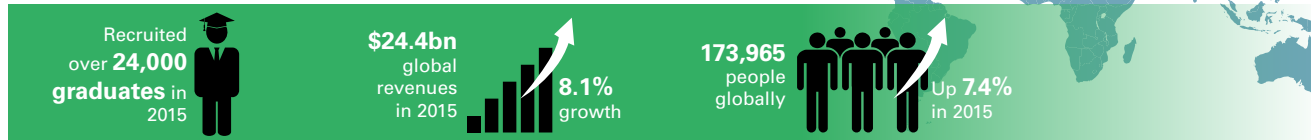
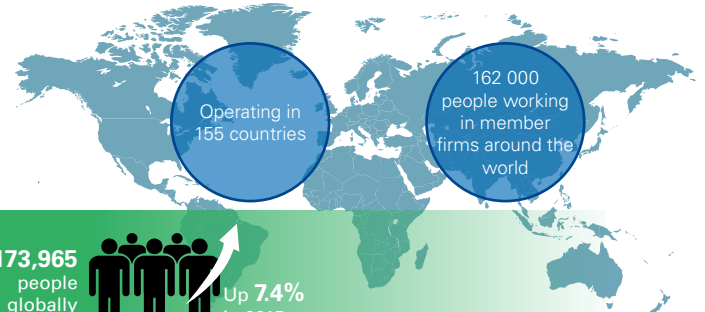
FintechTrends

- BNA
- Banks: BPA, BCGTA, BMA, BANC, BPC, BCI, BCA, BFA, BIC, BRK, BNI, SOL
- Citi GPS, “How Fintech is Forcing Banking to a Tipping Point”

KPMG Footprint

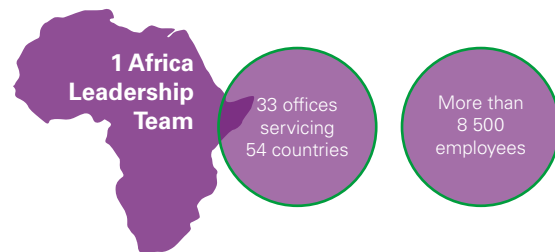
KPMG International

KPMG is a global network of professional firms providing Audit, Tax and Advisory services. The independent member firms of the KPMG network are affiliated with KPMG International Cooperative (KPMG International), a Swiss entity. Each KPMG firm is a legally distinct and separate entity and describes itself as such.



KPMG Africa

KPMG's Global Africa Practice is a unique platform in which all KPMG member firms on the continent participate. The objective of the African member firms is to provide consistent, high-quality services to multinational, regional and local clients and to enhance product offerings in certain previously under-served markets.



33 practices
54 countries

■ **Licensed KPMG Offices**
■ **Serviced out of another country**
(Refer to table below)

Angola services
São Tomé and Príncipe

Cameroon services
Central African Republic, Chad

East Africa services
Burundi, Eritrea, Ethiopia, Somalia, Sudan South

Egypt services
Sudan

Nigeria services
Liberia, The Gambia

Ivory Coast services
Burkina Faso, Guinea, Niger

Morocco services
Western Sahara

Mauritius services
Comoros, Madagascar, Seychelles

Portugal services
Cape Verde

Senegal services
Guinea-Bissau, Mauritania,

South Africa services
Lesotho



Africa Payments Leadership



Bisi Lamikanra

Partner
Financial Services
Africa
T: +23 480 3402 0982
E: bisi.lamikanra@ng.kpmg.com



Joleen Young

Associate Director
Africa Payments Advisory
Africa
T: + 27 71 402 9165
E: joleen.young@kpmg.co.za



Alison Beck

Partner
South Africa
T: +27 82 492 2709
E: alison.beck@kpmg.co.za



Bryan Leith

COO
Project Africa
T: +27 83 252 2008
E: bryan.leith@kpmg.co.za

Africa Payments Advisory Team

Antony Nzamu

Associate Director
Technology Risk
East Africa
T: +254 709 576 247
E: anzamu@kpmg.co.ke

Patrick Kipsang

Senior Consultant Management
Consulting
East Africa
T: +254 202 806 000
E: pkipsang@kpmg.co.ke

Chantal Maritz

Associate Director
Management Consulting
South Africa
T: + 27 82 717 9916
E: chantal.maritz@kpmg.co.za

Oxana Trigubets

Manager
Financial Risk Management
T: +27 60 997 4962
E: oxana.trigubets@kpmg.co.za

Ladi Asuni

Senior Manager
Technology Advisory
Nigeria
T: + 23 480 3975 4101
E: ladi.asuni@ng.kpmg.com

Samuel Aluko

Senior Manager
IT Advisory
Ghana
T: + 23 330 277 0454
E: samuelaluko@kpmg.com

Francis Donkoh

Manager
IT Advisory
Ghana
T: +23 330 277 0454
E: fdonkoh@kpmg.com

Andy Akoto

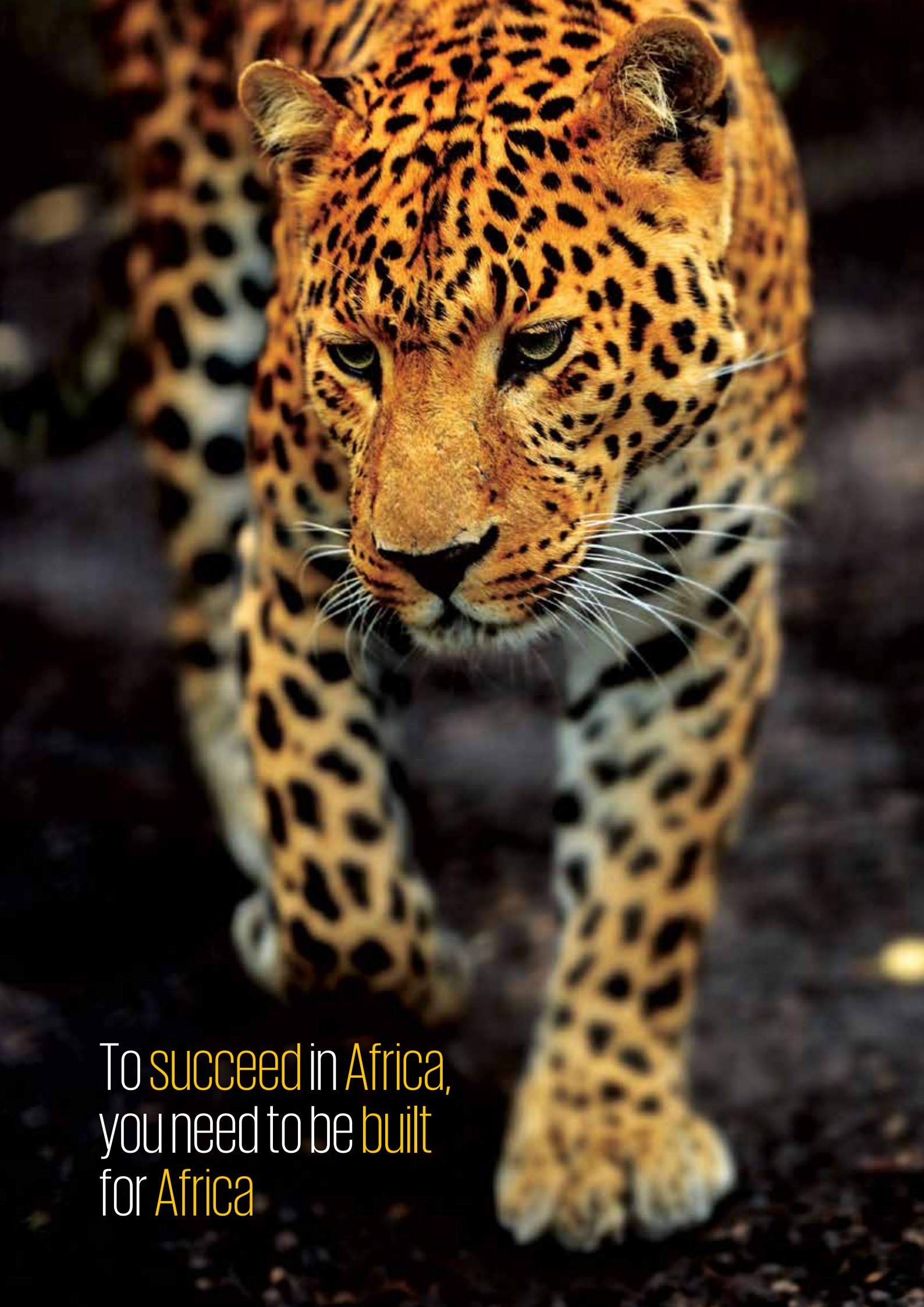
Partner
Ghana
T: +23 320 817 4629
E: aakoto@kpmg.com

Goncalo Traquina

Associate Partner
Advisory
T: +35 191 510 0237
E: gtraquina@kpmg.com

Marcel Kopoin

Partner
Cote d'Ivoire
T: +22 50 214 4040
E: mkopoin@kpmg.ci



To succeed in Africa,
you need to be built
for Africa

kpmg.com/socialmedia



kpmg.com/app



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2017 KPMG International Cooperative ("KPMG International"), a Swiss entity. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.15907MC